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DISPLACEMENT IN BOSTON'S APPRECIATING NEIGHBORHOODS: THE INTERACTION OF GOVERNMENT POLICIES AND MARKET FORCES

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DISPLACEMENT IN BOSTON'S APPRECIATING NEIGHBORHOODS: THE INTERACTION OF GOVERNMENT POLICIES AND MARKET FORCES

BOSTON HOUSING POLICY WORKSHOP
DEPARTMENT OF CITY AND REGIONAL PLANNING
JOHN F. KENNEDY SCHOOL OF GOVERNMENT
HARVARD UNIVERSITY
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BOSTON HOUSING POLICY WORKSHOP MEMBERS

Charles W. Callans
William E. Churchill
Jonathan Greenberg
Leonard L. Lucas
Peter W. Miller
Jerome L. Rappaport, Jr.
William J. Streeter
Allan Yeung
Jeanie Yuen

FACULTY ADVISOR: John Yinger

EXECUTIVE SUMMARY

This report, conducted by graduate students at the Harvard University John F. Kennedy School of Government's Department of City and Regional Planning Program, evaluates the roles of Federal, State and City governments in Boston's appreciating neighborhoods, where displacement is of increasing concern to residents and policy-makers. We determine the market forces and government policies that cause displacement and identify which level of government has the greatest ability to prevent displacement.

To be specific, this report provides:

1. a description of market forces that interact to cause displacement,
2. an analysis of federal, state and city influence on the market forces behind displacement,
3. an assessment of policy options available to the city to alleviate displacement pressure.

Displacement is of concern to policy-makers to the extent that it imposes hardship on tenants. We have therefore defined displacement as tenant relocation caused by eviction unrelated to the tenant's behavior, an increase in the price of housing beyond the resident's ability to pay, or removal of an apartment from the housing stock. In appreciating neighborhoods, displacement often occurs when an apartment is converted to a condominium, a 1-4 unit structure changes owners, or an apartment's rent is increased substantially.

Market Forces

The workshop examined the supply and demand for housing in Boston which determine market price levels and quantity of housing units available. Conceptually displacement occurs when market forces lead high-income households to search for housing in the existing housing stock in neighborhoods where many low-income or elderly households currently live. We found that:

A. Demand for good quality housing units in certain control neighborhoods has increased because:

- The growth of the service industry in downtown has attracted an increased number of young professionals into the Boston housing market, who focus their housing search in neighborhoods near the CBD.
- Life style (smaller households, more divorces, delaying of marriages) and demographic changes (maturation of Baby-Boom generation) have led to increasing number of households.
- Because of high inflation and federal tax benefits, higher-income households are encouraged to become homeowners.
- As the mortgage market becomes more accessible to women, an increasing number of female households - single or divorced - enter the owner-occupied housing market.

B. The supply of both rental and owner-occupied housing reacts to the increased demand in various ways.

- With rising construction costs, mortgage interest rates and land costs, apartment developers find fewer households willing to pay the high rents needed for new construction even in preferred neighborhoods because those who can afford these rents have strong tax benefit inducements to own. As a result, new construction is largely unjustifiable under current market conditions.
- Developers/landlords turn to the existing stock to house the newcomers either by converting to condominiums, replacing current tenants with wealthier ones, or selling to new households.
- The high demand for ownership encourages owners of apartment buildings to convert to condominiums. In fact, 42 percent (3702 units) of the net increase in owner-occupied units in the last decade came from condominium conversion.

C. Under these aforementioned market conditions, displacement can be categorized in three main processes.

- Some rental units are converted to condominiums and sold at a price much higher than existing tenants are able to pay.
- Rent levels for existing apartment units are "bid up" by the increased number of higher-income households to a level at which 1)

existing tenants are unable to pay but 2) new construction is not justified.

- When absentee-landlords or long-term owners sell their units to capitalize on rising prices, the new landlords must raise rents, sometimes beyond existing tenants' ability to pay, in order to cover more expensive renewed mortgages.

If the underlying trends in inflation, demographic changes, and high construction costs persist, the displacement pressure in the appreciating neighborhoods is expected to get even worse.

Influence of Government Policies

Our analysis of the extent to which different levels of government contribute to, or alleviate, the displacement situation, shows that:

- The federal government has affected the market forces that cause displacement more than other levels of government. Federal tax subsidies to ownership in an inflationary situation account for most of the strong demand for ownership, which is probably the most important driving force behind displacement.
- Since the state government has little effect on urban housing conditions, its impact on the Boston housing market is minimal.
- City programs have not significantly modified the market forces underlying displacement which are mainly determined by various macroeconomic and demographic factors. However, the city has influenced displacement to some degree by channeling development into certain neighborhoods.

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INTRODUCTION

INTRODUCTION

This study evaluates how federal, state, and local policies in Boston have either created or prevented housing market situations that force people from their homes. It considers what governments can do to prevent further displacement if they choose to intervene in the future. This study focuses on displacement from rent increases and condominium conversion. We recognize households may be forced from their homes through abandonment or demolition as well, but these events, which have been of secondary importance in Boston in recent years, are beyond the scope of this research.

Public concern about displacement has been widespread. The outcry about displacement stems in part from a feeling of powerlessness of long-term residents who face steep rent increases or eviction due to condominium conversion. Increasingly, those who feel threatened by this displacement pressure are turning to the public sector to ask for help, to place the blame, or both. It is important, therefore, to understand how much each level of government influences the urban housing market - both to keep expectations about governmental solutions realistic, and to make market interventions as effective as possible.

Definitions

We define displacement as occurring whenever a tenant household is forced to move, either because the price of its housing unit rises beyond its ability to pay, or because its unit is removed from the rental housing stock. Other studies define displacement differently; broadly as change in neighborhood character from blue-collar to white-collar residents, and narrowly, as direct eviction of an individual tenant. Our definition is more useful than these others, we believe, because it focuses on severe individual hardship, and therefore directs policy solutions towards those in greatest need.

Documenting Displacement

We have focused our study on the market conditions that make rents go up dramatically and induce landlords to convert apartments to condominiums. We identify the social and economic trends and government policies driving the displacement engine and evaluate the city's potential for protecting its residents from adverse market conditions. We did not attempt to identify individual instances of displacement, but instead looked for housing market activities in Boston that often lead to displacement, including condominium conversion, transfer of ownership, and large rent increases.

Inherent in our discussion of displacement is the question of how much of a household's income can go toward housing costs before it becomes unaffordable. Until recently, banks used 30 percent of household income as an estimate of what households "should" pay for housing. But a 1980 Boston survey found that 33 percent of the city's renters (including those living in subsidized units) pay over 24 percent, with 9 percent of the renters paying one half or more of household income towards rent.[1] Clearly, different households can afford to pay differing amounts of their income towards housing - depending on income level, number of children, and so on. Market trend analysis does not require pinpointing affordability, but setting a standard becomes important later in writing specific policy guidelines. We should note that Boston is a relatively poor city. The 1979 Census found the Northeast had a median household income of $20,000 to $21,000 per year - nearly twice the $10,700 Boston median income in 1980.[2] In all the analysis that follows, one must keep in mind the inescapable problem that low-income renters are facing rising housing costs, with limited income, and there are limited public resources available for housing.

Scope

To place the government role in displacement in perspective, this report develops a picture of Boston's housing market: that is, we trace the recent trends in costs, prices, and incomes that lie behind rapid rises in rents and condominium conversion. We divide the market into three types of neighborhoods: disinvesting, stable, and appreciating.[3] We then examine the market forces that create these conditions, and postulate the kinds of displacement that can occur in each. For instance, a disinvesting neighborhood is typified by costs of supplying housing rising faster than rents, a situation which, if it continues, leads to displacement through abandonment or condemnation. In stable neighborhoods, costs and rents are increasing at about the same rate; displacement results, then, only to households whose ability to pay for housing is outstripped by increasing rents that reflect the real increases in costs. In appreciating neighborhoods, increasing demand for housing drives up rents faster than the increase in real costs of supplying existing housing. In this case, residents are "bid out" of that market through rent increases or eviction due to condominium conversion.

In the sixties and early seventies, displacement from disinvestment was a more serious problem for urban areas than displacement from "gentrification." Even in the past decade, more than three times as many of Boston's private rental units were lost through demolition as were converted to condominiums.[4] We focus on displacement from rising rents and condominium conversion because this issue has aroused widespread public concern in recent years. We realize, however, that displacement is not limited to appreciating neighborhoods, and that our focus is only one part of a larger problem.

For displacement to occur in an appreciating neighborhood, we expect all three of the following to be true.

1. There must be an increase in the number of households seeking housing in a particular neighborhood,
2. These incoming households must be able to bid more for housing than existing residents, and
3. There must be limits on increasing the supply of housing to meet the growth in demand - usually because new construction is not profitable.

Order of Presentation

The first chapter of the report analyzes the growth in demand by higher-income households for housing in the city. The second chapter discusses why new housing has not been built to accommodate these new households and why owners of rental housing in some areas convert their units to condominiums. The third chapter brings these components together, identifies marketplace displacement mechanisms, and shows that the displacement problem is likely to worsen. All of this allows us to discover which government programs influence key housing market decision-makers. The fourth through sixth chapters analyze federal, state, and city policies that either contribute to displacement pressures, or have the most potential for protecting low or moderate income renters from these pressures. At the end of the government section, we summarize the market forces and government policies that relate to displacement. The last chapter presents policy suggestions for Boston, based on our analysis. We do not make specific recommendations, but show which policies are the most effective at achieving various goals the city might want to pursue.

Findings

Market Findings. Many of the forces driving displacement are beyond effective government influence or control. Pressures on rents and surging condominium conversion result from new and wealthier households entering a particular housing market in which the housing stock is not growing. These households choose the downtown area for a variety of reasons, including proximity to work, preferences for urban lifestyle, and the relative price advantages of central city versus suburban housing. In those neighborhoods where the new demand focuses, the generally higher-income newcomers bid the rental housing from existing residents through mechanisms listed below. Because rents in Boston's existing housing stock are far lower than rents required for private construction, little expansion of private housing can be expected without some form of subsidy.

We identify three major ways displacement occurs in appreciating neighborhoods.

1. Condominium conversion (at a price beyond a resident's ability to pay),
2. Sale of a building by a long-term owner who has kept rents below the market rate,

3. Rapid increases of rents for units where the new households want to live.

The market chapter discusses how the recent trends causing displacement can only be expected to worsen, making this problem of increasing concern to public policy-makers.

Government Findings - Federal. Federal policy appears to influence the housing market more than any other government policy through its increasingly large income tax subsidies for home-ownership. These subsidies explain a large part of higher income households' ability to bid units out of rental use into ownership tenure. Inflation and the higher income of new households have made these subsidies grow dramatically in recent years, while federal aid to low-income renters through housing programs have been growing at a far slower rate. If inflation continues, and the number of higher-paying jobs in the central city continues to increase, present federal income tax policy will continue to subsidize incoming households more than existing residents.

State. State influence on displacement in Boston seems minimal, less than that of federal or city government. By giving the city power to regulate and tax housing market transactions such as sales or conversions to condominiums, the state could potentially expand the control the city has on suppliers' responses to market trends. For example, the condominium enabling legislation passed by the state in 1964 significantly affected Boston's residential market. Because Boston has a large stock of multi-family structures, and because conversion of existing buildings is almost always cheaper than new construction, Boston became relatively more attractive to households who want and can afford home-ownership and urban location. It took a while for home-buyers (and their attorneys) to accept the condominium form of ownership, but it spread rapidly in the late seventies.

In principle, state-financed housing programs avert displacement by helping elderly renters avoid eviction for conversion to condominium, and by subsidizing moderate income first-time home-buyers, but the programs have so little money available and are spread so thin, that they have had little influence on Boston's housing market.

City. City influence on the housing market is less than federal, more than state, and seems best suited to shaping and directing market forces rather than creating or suppressing them. Nonetheless, by directing federal expenditures like Urban Development Action Grants (UDAGs) and Community Development Block Grants (CDBGs), and through controlling rents and regulating condominium conversion, the city has some power to protect certain residents or areas from adverse market conditions. Although real estate tax policy is under city control, and attracts a lot of attention, we conclude it has had little effect on appreciation or displacement in Boston.

In our last chapter we ask: How can Boston best apply its resources towards averting displacement, if it chooses to intervene? The question of how much of the city's resources should be devoted to intervention in the housing market, (to the possible detriment of other policy goals), is not addressed in our study.

FOOTNOTES

INTRODUCTION

1. Boston Redevelopment Authority. Characteristics of Boston's Population and Housing, 1980. Center for Survey Research. Boston Redevelopment Authority. Boston, Ma. November, 1980. Table I-2.

2. Ibid. BRA Household Survey. Table M-1.

3. Similar neighborhood classification systems have been used before by Rolf Goetze and Anthony Downs.

4. Demolition = 9,900. Source: Bonnie Hendorfer, Condominium Development in Boston. Boston Redevelopment Authority. Boston. September, 1980. p. 81. Condominium conversion that involved displacement (Conversion minus the number of tenants who bought their converted unit) was 3632 units. Source: Ibid., p. 79.

PART I

THE HOUSING MARKET IN BOSTON

CHAPTER ONE

DEMAND FACTORS THAT CONTRIBUTE TO DISPLACEMENT

This chapter analyzes the recent increase in the number of higher income households seeking to live in a few neighborhoods in Boston. As explained in Chapter 3, this inflow of new households is a key cause of displacement.

Specifically, the increased effective demand for city housing stems from the interaction between the increased numbers of households seeking urban housing, the high price and decreasing availability of suburban housing, the number of higher-wage jobs in the Central Business District (CBD), and the social trends towards two-wage earner households without children. Additionally, the Boston housing market has been affected by an increased demand for ownership. This new demand is due primarily to inflation, the federal tax code, and home-buyers' expectations of continued inflation.

Although the above factors explain the growth in housing demand, we emphasize that concentration of new demand in particular neighborhoods produces the greatest amount of displacement. Displacement arises less from the disequilibrium of supply and demand for housing in the entire city than from competition for housing within a few neighborhoods. As is discussed further in Chapter 3, displacement often results from that competition. This chapter considers the sociological and economic reasons for the geographic concentration of housing demand by the new households.

Increase in the Number of Households Seeking Urban Housing

The increase in the number of households seeking to live in Boston results from the maturation of the Baby-Boom population, higher household formation rates and the relative price advantage of city over suburban housing.

Major urban centers such as Boston have historically attracted a large proportion of the people in the 25-34 age range. During the 1970's, the proportion of the total population in that age range increased as the children of the Baby-Boom grew older. Effectively, the pool of persons with a tendency to live in an urban environment expanded, with the consequence that the number of persons seeking housing in Boston increased. A comparison of 1970 and 1980 profiles of Boston residents shows a 9 percentage point increase in the proportion of the population between 25 and 34 years old.[1]

The demand for urban housing has been accentuated by the increased tendency for each person to form a separate household. It seems likely that social changes in the direction of increased acceptability of single person households, particularly for women, the postponement of marriage and child bearing, and a high divorce rate underlie the trends in household formation. Nationally, the proportion of women between 25 and 34 years old living alone increased from 5 percent in 1970 to 10 percent in 1978. During the same period, the proportion of men in that age group who lived alone increased from 15 percent to 26 percent.[2] As seen in Table I below, we estimate that the proportion of the population that headed a household grew for all age groups from 1970 to 1980.[3]

Table I-1[3]

HOUSEHOLD FORMATION

(% in age group that are head of a household)

	1970	1980
15-24	18.0%	19.4%
25-34	49.4%	51.3%
35-44	52.6%	59.2%
45-64	56.6%	62.3%
65+	59.8%	62.4%

The rising price and decreasing level of construction of suburban single-family homes has probably induced some households who would have chosen the suburbs to live in the city. Nationally, between 1970 and 1975, median housing costs for first-time buyers of new homes increased 82 percent, while median family income rose only 39 percent.[4]

Additionally, a 1980 report by the Massachusetts Office of Policy Development estimates that since 1975 the construction of new housing units has lagged about 20,000 units behind demand annually.[5] We speculate that the primary effect of these trends has been to induce some households to stay in Boston, rather than purchase a single-family home. That is, households that might have left the city now choose to remain due to the rising cost and decreasing availability of suburban housing.

Higher Incomes of New Households

The demand for housing in Boston changed not only through an increase in the number of households seeking housing, but also through the greater income resources available to the new households. We attribute the income change to the growth of office employment in the CBD, and the trend toward two wage earner households without children.

The expansion of the office employment in the CBD has played a critical role in Boston's housing market. It has motivated employees, particularly those in the 25-34 age group, to live near the CBD because of the increased number of middle-income, i.e. professional and white-collar, positions in the city. A 1974 BRA study states that office employment in Boston increased from 28 percent of total city employment in 1950 to over 40 percent in 1974.[6] The impact of this trend on the occupational distribution of Boston residents is shown in the seven percentage point increase between 1970 and 1980 of residents in professional, technical and managerial positions.[7] The implications for growth in housing expenditure levels are substantial. The 1974 BRA study reports that in 1974, the medium income of professionals and managers was $17,380, compared to the overall city medium income of $7,835.[8] We discuss below the important dimension of proximity to the CBD; here we emphasize that young, professionally employed households have a high level of resources to spend on housing.

The level of housing expenditures has been supplemented by the growing number of two wage earner households without children. National statistics show that of all families, the proportion of two wage earning households grew from approximately 35 percent in 1970 to 38 percent in

1978.[9] The increase in childless families in the same period is significant, changing from 42.1 percent to 48 percent.[10] The combination of two incomes raises the amount a household can comfortably afford to spend for shelter, thus increasing the household's demand for housing. The absence of children has a similar effect, reducing the household's level of non-housing expenditures. It may also be true that childless couples are less concerned about the problems in Boston's school system than are couples with children.

The Increased Demand for Ownership

The interaction of inflation and the Federal tax code, plus the new households' expectations of continued inflation have stimulated the demand for ownership. We refer the reader to Chapter 4 for a detailed discussion of these forces. In brief, the progressive nature of federal subsidies for ownership is intensified during periods of inflation. From the perspective of households, each year of not owning represents an increasing tax payment and a rise in the price of ownership. So long as inflation is expected to continue, households are motivated to purchase as soon as possible. Boston is not exempt from this development in housing demand and the consequences for displacement are delineated in Chapter 3.

The Geographic Concentration of New Housing Demand

The desire for neighborhood homogeneity and proximity to the workplace produces pockets of housing demand by the new households. The formation and expansion of those areas where new households seek to live determines the character of Boston's displacement problem. In particular, displacement occurs when a neighborhood occupied by lower income households becomes attractive to higher income households. The location of specificity of the new demand stems from the social phenomena of preference for neighborhood homogeniety and proximity to one's workplace.

The desire for neighborhood homogeneity in America has been well documented.[11] Simply stated, Americans tend to live near persons who are similar to themselves. The criteria for judging similarity are subject to debate; for our purposes, it is sufficient to note that young, professional or white-collar households are attracted to a few locations in Boston where other young professionals live. As the number of households coming into those locations increases, the neighborhood of young professionals expands to meet the demand for housing.

Most probably, proximity to the CBD largely determined which locations would become the focus of the new housing demand.[12] As was mentioned above, the growth of office employment in the CBD drew young, professional households into the city. The convenience and transportation cost savings of living near one's workplace motivated new households to reside in or near the CBD. These shared motivations and the desire for neighborhood homogeneity produced the geographic concentration of the housing demand.

Conclusion

Changes in the level and pattern of housing demand are a key cause of displacement in Boston. The increased number of households seeking to live in the city, their higher incomes, and the increasing advantages of ownership interact to generate displacement pressures. The geographic focus of the new housing demand concentrates the displacement in Boston in a few neighborhoods (South End, Back Bay/Beacon Hill, Central and Charlestown).

FOOTNOTES

CHAPTER ONE

1. U. S. Census of Population, 1970 and 1980.

2. "A Statistical Portrait of Women in the United States: 1978;" Current Population Reports, P-23, No. 100; p. 23.

3. U.S. Census of Population, 1970 and "Characteristics of Boston's Population and Housing: 1980," BRA Research Dept.

4. Income/Expense Analysis: Apartments, Condominiums and Cooperatives: 1969-1979; Institute of Real Estate Management.

5. "Housing in Massachusetts," Massachusetts Office of Policy Development, 1980; p. 7.

6. "Boston's New High-Rise Office Buildings: A Study of the New Employees and their Housing Preferences;" BRA Research Dept.; 1974; p. 14.

7. "Characteristics of Boston's Population and Housing: 1980;" BRA Research Dept.; 1980; Table E-1.

8. op. cit.

9. "American Families and Living Arrangements;" Current Population Reports, P-23, No. 104; p. 8.

10. ibid.

11. see Anthony Downs' Understanding Neighborhoods and Constance Perin's Everything in its Place.

12. see William Alonso's "A Theory of Urban Land Market" and John Yinger's "Housing Utility Maximization in and Urban Area: A Diagramatic Approach."

CHAPTER TWO

OPTIONS OF BOSTON'S HOUSING SUPPLIERS

To understand the displacement pressure in certain neighborhoods we must combine an analysis of housing supply with our examination of the increase in households. Nation-wide, cash returns to owners of rental properties have been declining as expenses have risen faster than rents. In this chapter, we explain why this trend gives profit-maximizing owners of rental housing in appreciating neighborhoods an incentive to convert to condominiums or replace their generally lower-income tenants with new, higher-income households who can afford higher rents. In chapter 3, we analyze the displacement implications of these activities.

Incentives for New Rental Development

Expanding the supply of rental housing to accomodate new higher-income households would ease the pressure on existing tenants in appreciating neighborhoods. With few exceptions, however, current construction costs, scarcity of land, and the expectation that rents will continue to grow less rapidly than operating costs imply that new rental construction is not as profitable as adapting existing stock for high-income renter households.

Since 1967, construction costs in the Boston area have risen 161 percent, twice as fast as rents, which only rose 82 percent. Builder financing costs, which represent 11 percent of the cost of construction, have increased 200 percent from 1969 to 1977.[1] A builder will not build an apartment building unless the present value of the payments on the construction loan is less than the present value of expected future net rents less operating and maintenance costs. This calculation is not altered substantially if the builder plans to sell to a landlord, because the price the builder receives for the building will be the present value of future rents less costs; in either case the payments on the construction loan must be less than net rents. Hence, the slow growth in rents compared to construction and operating costs explains the lack of new apartment building construction except in a few pockets of Boston.

Several factors contribute to the slow growth in rents relative to construction costs. Many households who could afford to rent at market levels would rather own than rent. As we will discuss in Chapter 4, federal income tax policy offers incentives to own instead of rent by allowing deductability of mortgage interest and property taxes. Although some owners claim that current market rents are suppressed because many tenants in the $20,000 to $30,000 income range are protected by rent control,[2] rents necessary to support unsubsidized construction of rental housing are clearly beyond the means of the vast majority in Boston's residents, including those in the $20,000 to $30,000 income range. We estimate, for instance, that construction of a hypothetical 160 unit luxury building in Brighton would need average rents of $1700 per month.[3] Even assuming tenants could pay 1/3 of their income for rent, these households would need to make more than $60,000 per year.

Unless enormous subsidies are used, or until market rents in particular areas rise to replacement cost, private market new construction can not be expected to relieve displacement pressure.

Incentives Facing Owners of Existing Stock

As mentioned above, the returns to owners of rental housing have been declining city-wide. From 1967 to 1979 operating expenses in Boston have increased between 200 to 270 percent, compared with an overall rent increase of only 82 percent over the same period.[4] On the average, rents did not even keep pace with inflation; Boston's Consumer Price Index has increased 118 percent since 1967.[5]

The implication we draw from these aggregate trends is that owners of rental property in areas that attract the new higher-income households have options open to them that the majority of landlords seem to be denied. The landlords of favored properties can either increase rents of existing tenants (absent rent control), raise rents and replace former tenants with new higher income renters, or remove the unit from the rental stock through condominium conversion.

Table II-1

CAPITALIZED VALUE OF STRUCTURE AS RENTAL HOUSING

1) Annual Gross Income	$30,000	($250/month per unit)
2) Operating Expenses @ 63% *	18,900	
3) Net Income Before Financing	11,100	
4) Market Value **	86,719	
5) Gross Rent Multiplier	2.9	

*Operating expenses include maintenance and repairs, taxes, insurance, utilities and represent the Boston average. (Institute of R.E. Man.)

**Income flow is capitalized to represent a present value. Cap. rate = 12.8%

Any profit-maximizing owner of rental property will raise rents as fast as the market will bear, even if substantial increases necessitate replacing current residents with new ones.

Now let us outline the economic factors that lead a landlord to convert. Table II-1 shows the value of a hypothetical ten unit building in Back Bay when it is in rental use. The market value estimate is based on comparing the cash return (income minus expenses) to returns available from other investments to determine how much the income-producing asset is worth.

For instance, a buyer of a rental building will compare the returns available from the building with returns available from other buildings and other investments. Expectations about risks, rent levels, appreciation, expenses, income tax implications, and possibility of condominium conversion, all play a part in determining the market value of an apartment building. In this case, we have looked just at cash income before mortgage payments and figured what purchase price would result in a 12.8 percent return on investment.[6]

To understand the incentives facing an owner of rental property in this area, we need only observe that recent sales of condominiums have taken place at ten times the annual gross rent--in this case each unit would be worth $30,000.[7] Compare this to the market value of a unit when it is rented, which is about 3 times gross annual rent, or $9,000 per apartment.[8] This building, then, would be worth $210,000 more as condominiums than as apartments.

The economics of conversion vary with location, structural quality, and neighborhood reputation. Home-buyers pay more for high quality structures in areas that appear to be improving; prices reflect expectations of increases in value as the neighborhood image improves. Larger condominium converters say they prefer to convert buildings that already house high-income renters in high quality structures, or buildings in good locations that are or can be made vacant. BRA research found that the first conversions were predominantly high-rent apartments, but are now occurring more and more in low and moderate rent level buildings. Overall, from 1969 to 1979, 4,415 rental housing units were removed from the rental market through condominium conversion. Forty percent of those apartments removed were luxury rental units, approximately 16 percent were lodging house rooms, and 43 percent were previously moderate priced rentals.[9]

Condominium conversion becomes even more costly because the tax laws governing the sale of rental housing influence that the property be sold to a professional converter before the units are sold to the tenants. The federal government treats the sale of the apartment building to a converter as capital gains, which can be taxed at a rate as high as 28 percent. On the other hand, if the owner were to convert the apartments himself, his gain would be taxed as personal income, at a rate which could be as high as 70 percent. This quirk in the tax laws adds costs to the conversion process and has ushered in a new operator in the housing market, the professional converter.

Incentives Facing New Owners of Rental Stock

New owners of rental property face a different set of options than existing or long-term owners. After sale or refinancing, current interest rates are incorporated into the operating expenses of existing properties. An existing owner with a low or non-existent mortgage can afford to charge lower rents than a new owner who must pay back a market-rate mortgage.

Table II-2 shows income/expense analyses for two different properties, both of which earn $888/year for the owner after all expenses except debt service. Table II-3 illustrates how varying the interest, for a given loan amount, can dramatically affect the cash flow after financing, or cash

Table II-2

INCOME STATEMENT OF 10 UNIT APARTMENT BUILDING

	Low-Rise Unfurnished 600 sq. ft./unit	Low-Rise Unfurnished 780 sq. ft./unit
Annual Gross Rent	2,340	3,636
Monthly rent	195	303
Expenses	(1,452)	(2,748)
Monthly expenses	(121)	(229)
administrative	13	25
heating/fuel	18	43
electricty	4	17
water/sewer	2	5
supplies/other	7	13
Maintenance		
security	-	2
grounds/maint.	1	1
repairs/maint.	14	17
painting/decorating	3	9
Taxes	49	68
insurance	4	6
recreational/amenities	6	3
other payroll	-	20
Net Income Before Financing (Free & Clear)	888	888

Source: Institute of Real Estate Management, Income/Expense Analysis: Apartments, Condominiums and Cooperatives, 1969-1979.

Table II-3

AMOUNT OF DEBT SERVICE FOR DIFFERENT INTEREST RATES

Mortgage Interest Rate	Debt Service per year per unit (Given a sales price of $5,223 per unit)	Net cash Return to owner after debt service (Rent-Expenses)
8%	$ 489	$ 399
10%	575	313
12%	666	222
14%	760	128
16%	857	31
16.64%	888	0

return to the owner. For example, debt service at a 10 percent interest rate costs $575/year per apartment compared to a debt service cost of $857 for the same loan amount at 16 percent interest. Hence, to maintain the same return, an owner has a strong incentive to raise rents by $282 a year for each unit. If the owner cannot find tenants at such a high rent, he may reduce other expenses--for instance, by deferring maintenance or not paying real estate taxes.

Summary

In summary, this chapter showed how declining returns in general from rental housing sets the stage for landlords in appreciating neighborhoods to replace long-term residents with new ones, or convert to condominiums. The tax treatment of the original owner's sale of the project which forces the owner to sell to the professional converter adds additional costs to the conversion process. In addition, we showed how transfer or refinancing affects the cash flow from an existing property and may lead to large rent increases. We also explained how rapid increases in construction costs have stymied almost all new private construction of rental housing, forcing new households to compete for the existing stock. The following chapter will bring trends in demand and supply together to explain displacement.

FOOTNOTES

CHAPTER TWO

1. Institute of Real Estate Management. Income/Expense Analysis: Apartments, Condominiums and Cooperatives, Years 1969-1979.

2. Heudorfer, Bonnie. Condominium Development in Boston. Boston Redevelopment Authority, City of Boston, Boston. Sept., 1980. p. 79.

3. Rents would be:

$ 1543/ month	1 bedroom
$ 2094/month	2 bedroom
$ 2314/month	3 bedroom

These rents are based on current construction costs ($60,000 per unit); cost of land in Brighton and financing costs based on 15% interest rate on a mortgage for 90 % of replacements costs of $76,000/unit; operating expenses at 25% and property taxes at 18%. The projected debt service and developers profit are subtracted from net rents. Construction costs are based on interviews with Steven Wasko and Jim Tierney, appraisers for the Housing Division of HUD, January, 1981.

If the mortgage was conventionally financed (at 15%), the debt service payment would be $2,122,730, and the average monthly rent for a one bedroom apartment would have to be $1543, $2,094 for a two bedroom and $2,314 for a three bedroom apartment.

$4,355,658	gross income	$4,355,658		$1,974,420
217,782	allowance for vacancy			
$4,137,835	adjusted gross income	1543	1 BR	700
744,818	property tax (18%)	2094	2 BR	950
$3,393,058		2314	3 BR	1050
1,034,469	operating expenses (25%)			
$2,358,589	net income			
2,122,730	debt service			
235,859	profit			

Starting with the estimation of $76,000 replacement cost, the mortgage would be 90% of that which would be equal to $68,400. The debt service with a .1504 annual constant would be $10,287 which would be 90% of net income equal to $11,430. Net income would be 57% of adjusted gross income (AGI) which would make adjusted gross income equal to $19,340 and gross income equal to $21,048. Average monthly rent would be $1759.

4. Institute of Real Estate Management. Income/Expense Analysis: Apartments, Condominiums and Cooperatives. Years 1969-1979.

5. U.S. Department of Labor. Bureau of Labor Statistics. Consumer Price Index, Residential Rent.

6. A capitalization rate of 12.8 is somewhat arbitrary but is close to the current money market yield.

7. Heudorfer, Bonnie. Condominium Development in Boston. Boston Redevelopment Authority. Boston. Sept. 1980. p. 41.

8. Ibid, p. 41.

9. Ibid, p. 29.

CHAPTER THREE

THE MARKET ANALYSIS OF DISPLACEMENT IN BOSTON

This chapter explains how supply and demand factors interact in the housing market to cause displacement in appreciating neighborhoods.

In this chapter, we will first review the broad trends in the demand and supply forces that appear to cause displacement, pinpoint the specific market activities that potentially displace low and moderate income existing tenants, and examine the motives of the key actors involved in these market activities.

In the second section, we present evidence of these market activities in Boston. We first explain how more small households looking for housing near their downtown office jobs can cause displacement in Boston despite an 80,000 person decline in population and a 10,000 unit increase in the housing stock from 1970 to 1980. Second, we show how the concentration of the high income demand, the lack of the new construction in the preferred neighborhoods and the increased competition over the shrinking supply of private market housing units cause displacement of existing tenants in appreciating neighborhoods. For Boston as a whole, however, the increased competition over private market housing units has been mitigated somewhat by outmigration of residents, a decreasing vacancy rate and an increase in subsidized housing units.

In the final section, we rank the potentially displacing market activities by level of frequency and the potential for displacement. In particular, we ask: How much displacement is likely to occur in the future? Which market activities have potentially displaced the most low and moderate income tenants? We can use our analysis of the market activities that cause displacement to recommend which supply and demand factors government officials should focus their leverage on should they choose to intervene.

SECTION I: Analyzing Displacement in the Housing Market

A Review of Trends in Supply and Demand

Chapter I explains the increase in housing demand by young, higher income professionals who form smaller households with two wage earners and seek housing in the center city because they want to live near their downtown office jobs. These incoming households put pressure on the rents of existing units because a large proportion of them prefer to rent because of their age and life style preferences, and they have higher incomes than existing tenants. The higher their incomes and the higher the inflation, the more these incoming households and higher income renters are willing and able to bid for ownership because of the interaction of inflation and the federal income tax deductions. (See Chapter 4 and Appendix F).

Chapter 2 discussed the incentives of the developer to provide various housing alternatives. Because households rich enough to pay the rents needed to justify new construction usually prefer to be home-owners, little new construction can be supported. Even those households that do choose to rent can find existing units with rents far cheaper than the price new construction of rental units would require. The landlords, therefore, recognize the profit that can be made by providing existing or slightly rehabilitated units to the young professionals as higher priced rental units or by responding to the increased demand for ownership by turning apartments into condominiums, selling their absentee-owned 1-4 unit building to an owner-occupant, or selling their owner-occupied building to a young incoming households.

Market Activities that Cause Displacement in Appreciating Neighborhoods

An increase in demand for housing in some neighborhoods combined with the stagnating growth in the supply of housing units has resulted in an increase in the number of owner-occupied units, a decrease in the vacanacy rate, and an increase in rents. Owner-occupancy has increased, due to higher income demanders, aided by inflation and the federal income tax deductions. In addition, the age characteristics of existing residents have led to more ownership transfers.

This analysis helps explain displacement in appreciating neighborhoods in Boston. Displacement occurs when 1) households with higher incomes are willing to pay a rent that low-income residents are unable or unwilling to pay but which is not high enough to induce new construction, 2) an absentee owner sells a 2-4 unit building to an owner-occupant or an older, long-term resident sells to a younger buyer so that the new owner raises rents to cover higher mortgage payments, or 3) apartments are converted to condominiums at a price tenants are unable or unwilling to pay.

In all of these situations, tenants may be faced with precipitous increases in housing costs.

It is difficult to be precise about the increase in rent, because the increase in rent depends on the amount of rehabilitation done on the apartment and numerous other cost factors that vary among apartments.

When a transfer of property occurs, however, it is possible to illustrate how dramatic the increases in housing costs can be. For instance, a new owner must make payments on a market rate mortgage instead of the below market-rate mortgage (or no mortgage) of a long-time owner. In a typical case which is illustrated in Appendix J, the landlord's debt service costs increase $99 a month per unit if the interest rate is 15 percent compared to a landlord who had a 6 percent mortgage and $145 a month per unit if the previous landlord owned the property outright.

When a rental unit is converted to a condominium, tenants are displaced if they do not have sufficient equity to meet the down-payment or cannot afford the monthly payment for the mortgage. As shown in Appendix J, for example, conversion might raise the monthly cost of a unit by $175 the first year (84 percent). This cost would be reduced the next year according to the amount of federal income tax subsidies for ownership received by the households. The "true" cost may be lower than the original rent if one recognizes the return the household is receiving as the unit appreciates in value. However, a low income households is at a distinct disadvantage even if it is willing to pay this "true cost." First, a large down-payment is often required. Second, cash outlays are often substantially above "true cost" because the appreciation of the unit is only realized upon sale. Finally, lower income households receive a smaller federal income tax subsidy than higher income households. (See Chapter 4 below).

Supply and Demand Factors that Cause the Potentially Displacing Market Activities

In this section, we will sharpen our focus and examine the particular factors that lead to the three displacing market activities: condominium conversion, transfer of ownership, and large rent increases.

Condominium conversion will continue to occur as long as office employment continues to grow, inflation and federal income tax subsidies for ownership continue to interact to increase demand for ownership, and apartment buildings that can be profitably converted remain. The demand for ownership has been spurred by the federal income tax and rapid inflation. The federal subsidies for ownership increase as a household's income grows, and the anticipated appreciation of a condominium purchase turns households into investors.

Presumably, both condominiums and 2-4 unit structures, as forms of ownership, equally satisfy a household's basic desire to own rather than rent in the city. In fact, the decision to purchase either of these forms of housing, given the intense demand for ownership, is fostered by the small size of the new households and the prohibitive costs of the first time home-buyer's alternatives. The smaller households are willing to accept less space in return for accessibility to downtown, particularly if they can obtain the benefits of homeownership. Condominiums and 2-4 unit structures are therefore tailor-made for these households.

Condominiums and 2-4 unit structures do differ, however, Households that prefer being in close proximity to downtown employment and cultural opportunities and want to avoid major maintenance responsibilities are more likely to purchase a condominium. Those who prefer a less dense environment with more open space and do not object to driving or taking public transit to work or to the maintenance and management responsibilities of being a landlord will opt for the 2-4 unit structure.

On the supply side, the motivation for converting apartments to condominiums or selling a 2-4 unit structure rests on the owners' ability to realize a profit by providing housing to the higher income households. It is possible, however, that absentee-owners have somewhat different reasons for selling their unit or structure than owner-occupants.

We speculate, based on a recent displacement study in Jamaica Plain, that owner-occupant landlords typically sell because of a change in their lives, such as retirement.[1] Although absentee-landlords may sell their 2-4 unit structure for similar reasons, these landlords may also sell because of the declining profitability of rental housing in Boston, which was described in Chapter 2. That chapter also discussed the economic incentives that lead owners of multi-family rental properties to convert to condominiums.

Rent increases, the third market activity that causes displacement, are a logical consequence of 1) the increased housing demand of young professionals in the age group that traditionally chooses to rent, 2) the decrease in the private market rental housing stock due to demolition, abandonment, loss of units to government subsidy and condominium conversion, and 3) the high cost of the new construction alternative. A profit-maximizing landlord in an appreciating neighborhood will raise rents as young professionals who are willing to pay more for housing than existing lower income tenants move into the neighborhood. Housing suppliers do not build new housing, that would drive the rents of existing units back down, because the high cost of new construction requires rents higher than the market rents in all but a few of Boston's neighborhoods.[2]

SECTION II: Displacement in Boston

We now turn to evidence about displacement pressure in Boston. We will explain the paradox that displacement occurs in Boston despite a drop in population and an increase in housing units. We will show that displacement in Boston results from increased competition over a shrinking private market housing supply in particular neighborhoods.

The Paradox of Displacement

Displacement has occurred in Boston despite a decline in population of 80,000 and an increase in the housing stock of almost 10,000 units between 1970 and 1980.[2] The explanation for this aforementioned paradox lies in the trends in household formation and the fact that the displacement pressure is focused in particular neighborhoods, namely those neighborhoods preferred by young professionals. Because of the factors mentioned in Chapter 1, the ratio of households to population increased from .339 in 1970 to .394 in 1980; (equivalently, the number of people per household decreased from 2.8 to 2.4).[4] The relevance of the increase in household formation is that the number of households, and therefore the demand for housing units, can increase despite a decline in the population. In fact, though the population dropped by 80,000 from 1970 to 1980, the number of households in the city increased by 3908.[5] This increase is the result of a 26,000 increase in households headed by someone between the ages of 25 and 34 (a 66 percent increase from 1970 to 1980) and a 19,000 decline in households whose head was more than 45 years old.[6]

Increased Competition over Private Market Housing Units

The increase in households does not fully explain displacement. In fact, the increase in the number of households was not as great as the increase in the number of housing units (3,900 vs. 9,600).[7] However, the overall picture of the increase in supply of and demand for housing units underestimates the displacement pressure in Boston because it disguises the increased competition over private market housing units, the locational dimension of the displacement pressure, and the substantial number of units that are being abandoned in non-appreciating neighborhoods.

The displacement pressure from the surging growth in the number of households seeking housing in particular neighborhoods is best exemplified by the fact that the number of households aged 25-34 who sought housing in the private market increased by 22,133 households from 1970 to 1980,[8] while the supply of private market housing units, both ownership and rental, decreased by 10,236.[9] This pressure on the private housing market is only relieved by the outmigration of households in other age brackets, a decreasing vacancy rate, and an increase in subsidized housing units.

The chart on the following page documents the changes in private market and publicly - assisted housing units. The current supply of housing units was able to accommodate the increase in the number of young professionals entering the city because 19,290 more subsidized housing units were provided and there was a net outmigration of 19,106 households with a head older than 45.

The increased competition over private market housing units is reflected in a decrease in the vacancy rate in Boston. In 1970, there were 14,666 vacant units, while in 1980, there were 20,270 vacant units, an increase of 5,804 units,[11] of which 4,244 were private market units.[12] Of the 20,270 vacant units, 7,222 were considered structurally unsound and 4,600 were vacant public housing units considered "vacant, not habitable."[13] As a result, the city contains 8,448 vacant habitable units, which translates into a 3.67 percent vacancy rate.[14] The comparable vacancy rate in 1970 was 4.83 percent (10,500 vacant habitable units).[15]

Table III-1

A BALANCE SHEET OF THE SUPPLY OF HOUSING IN BOSTON 1970 - 1980

		# of Units (+/-)	Reason
Private Rental	(1970)	+150,604	
		-8,700	Demolitions (1-4 unit structures)
		-2,100	Demolitions (apartments)
		-2,700	Rental to Section 8 subsidy
		-713	Rentals merged into condominiums (loss)
		-3,702	Condominium conversion
		-3,721	Increase in owner-occupancy
		+3,100	New construction
	(1980)	+132,068	(net decrease of 18,536 units)
Subsidized Rental	(1970)	+22,000	
		+2,700	Rental to Section 8
		+17,300	New construction of subsidized units
	(1980)	+42,000	(net increase of 20,000 units)
Owner-Occupied	(1970)	+59,584	
		+3,702	Condominium conversions
		+877	New construction and adaptive re-use
		+3,721	Increase in owner-occupancy
	(1980)	+67,884	(net increase of 8,300 units)

Locational Dimension of Displacement

This section will document a high appreciation rate in certain Boston neighborhoods and test our hypothesis about who the newcomers are and where they prefer to live. Although displacement pressure is not significant city-wide, we suspect that displacement has occurred in the downtown neighborhoods as the professionals working downtown and the 25-34 year old households who prefer the urban life-style of the core neighborhoods outbid the existing tenants. In the coming years, we expect that the continued growth in the number of young professionals will lead to the same "displacement" process in adjacent neighborhoods and pockets of outlying neighborhoods. The potential safety valves of a still-lower vacancy rate or new construction in core neighborhoods cannot be counted on.

To document the demand factors that lead to displacement, we examined neighborhoods that experienced a substantial increase in the proportion of high-rent apartments (defined to be apartments with contract rents greater than $150 per month in constant 1970 dollars).[16] We picked neighborhoods that most clearly demonstrated appreciation in order to best identify the major factors behind the market activities that cause displacement.

The neighborhoods experiencing an increase in the proportion of high-rent apartments above the average city increase were Back Bay/Beacon Hill, Central, South End, Charlestown and the West Roxbury, Roslindale, Hyde Park region. (See chart below).[17]

Table III-2[17]

CHANGE IN PROPORTION OF RENTAL UNITS WITH CONTRACT RENTS GREATER THAN $150/MONTH, (1970 DOLLARS) BY NEIGHBORHOODS 1970 TO 1980

	1970	1980	Change
East Boston	2	8	+6
Charlestown	2	14	+12
South Boston	3	6	+3
Central District	34	49	+15
Back Bay/Beacon Hill	57	65	+8
South End	5	26	+21
Fenway/Kenmore	26	32	+6
Allston/Brighton	37	41	+4
Jamaica Plain	17	10	-7
Roxbury	1	0	-1
Dorchester/Mattapan	8	9	+1
Roslindale/West Roxbury & Hyde Park	21	31	+10
BOSTON	19	25	+6

Four of these neighborhoods lie within or next to the Central Business

District, a characteristic that supports our hypothesis that appreciation is caused by the influx of young professionals employed in the downtown who want to live near their work.

These four neighborhoods also experienced the largest percentage point increase in the proportion of the neighborhood residents who were "Professionals." In fact, the percentage point increase in the proportion of "Professional" workers in these appreciating neighborhoods was two to three times the city average percentage point increase.

Table III-3[18]

CHANGE IN PROPORTION OF PROFESSIONAL AND WHITE-COLLAR WORKERS IN HIGH RENT NEIGHBORHOODS NEAR CBD 1970 - 1980

	1970	1980	Change
Charlestown	12	30	+18
Central	25	52	+27
Back Bay/Beacon Hill	46	71	+25
South End	19	36	+17
BOSTON	23	30	+7

Three of the appreciating neighborhoods experienced the expected influx of households aged 25-34: Back Bay/Beacon Hill, Central, and the South End.[19] All three neighborhoods have an extremely high concentration of young professional populations compared to the city average of 21 percent (Back Bay/Beacon Hill--39 percent, Central--29 percent, and the South End--28 percent).[20] The other two neighborhoods with a disproportional concentration of households in the 25-34 age group are Fenway/Kenmore and Allston/Brighton, which have significant rental opportunities adjacent to the downtown neighborhoods mentioned above.[21]

Our theory would also suggest there is a high concentration of small, two-earner households who bid housing units away from existing residents. The newcomers can pay more for housing because "professionals" get paid more money than current residents in Boston, two incomes are better than one, and the smaller household size allows the household to direct more of its income towards housing. The data show that Charlestown, the Back Bay/Beacon Hill and Central neighborhoods do have a disproportionate concentration of two-earner households, small households and households with incomes over $30,000.

Table III-4[22]

HOUSEHOLD CHARACTERISTICS IN APPRECIATING NEIGHBORHOODS

Neighborhood	% of HH with 1-2 People	Employment/Pop. Ratio (% over age 16)	% of HH with Income over $30,000
Charlestown	71%	67%	16%
Central	87%	65%	17%
Back B./Beacon H.	95%	79%	25%
South End	64%	52%	11%
City Average	64%	59%	8%

The large number of subsidized housing units for low-income families and unemployed adults in the South End may explain why this neighborhood fails to exhibit the characteristics we would expect in appreciating neighborhoods. There are, of course, pockets of appreciation within the South End, as well as within other neighborhoods that cannot be detected without more detailed data.

We also hypothesize that owner-occupancy will increase most in appreciating neighborhoods because of the factors, discussed in Chapter 1, that lead young professionals and high-income renters to want to own condominiums. In addition, central neighborhoods often have many, small rental units conducive to conversion.[23] The data support this hypothesis. Owner occupancy in appreciating neighborhoods increased dramatically from 1970 to 1980.

Table III-5[24]

OWNER-OCCUPANCY IN APPRECIATING NEIGHBORHOODS

Neighborhood	1970(%)	1980(%)	Change
South End	11	27	+16
Back Bay/Beacon Hill	6	19	+13
Central	9	16	+7
Charlestown	32	32	0
City	27	30	+3

From the data, we see that higher-income households have moved into core neighborhoods, driving up rents, and increasing owner-occupancy: market activities that potentially displace current residents. The displacement pressure, however, does not occur solely in the core neighborhoods. Young households aged 20-34 who would prefer to rent in the core neighborhoods but are rebuffed by condominium conversion or the high rental prices have redirected their rental housing demand to the abutting low and moderate income rental neighborhoods of Fenway/Kenmore and Allston/Brighton; (44 percent of Allston/Brighton population is age 21-30, while 62 percent of the Fenway/Kenmore population is 15-34).[25] Those households who prefer to own, but cannot afford the high prices of downtown ownership opportunities have opted for the cheaper ownership alternatives in the abutting South End neighborhood, or, if they prefer a less dense neighborhood setting, have turned to stable outlying neighborhoods to buy 2-4 unit structures from long-term owners.

Demand for ownership has shifted to those neighborhoods in which there is a large supply of housing stock that can offer first-time buyers smaller units with more suburban amenities such as yards. In fact, North Dorchester, South Dorchester, Mattapan and Roslindale have experienced an 11-15 percentage point increase in owner-occupancy.[26] This is partly due to the predominance of duplex and triple deckers in the housing stock of the neighborhood, the federal low interest programs that try to increase ownership opportunities for minority families, and city efforts to increase the rehabilitation of the city's duplex and triple decker housing stock by providing low interest rehabilitation money to owner-occupied housing.

Table III-6[27]

DISTRIBUTION OF STRUCTURES IN NEIGHBORHOOD BY # OF UNITS

Neighborhood	1 unit	2 and 3 units	% Owner-Occ.(1970)	(1980)
N. Dorchester	33%	45%	25%	40%
S. Dorchester	37%	53%	38%	49%
Mattapan	70%	20%	32%	44%
Roslindale	55%	30%	45%	59%
City	36%	26%	27%	30%

SECTION III: The Importance of Market Analysis to Government Policy Makers

Government policy makers need to know whether the displacement pressure is going to worsen and which market activities potentially displace the most households. We forecast that displacement will continue. In addition, we present the market activities (condominium conversion, change of ownership, or a boost in rents) in terms of their frequency and displacement potential. By combining our presentation of the market activities that should be of most concern to policy makers with our analysis of causal factors, we provide government officials with an effective strategy to slow down displacement.

Forecasting Displacement

Several factors suggest that displacement pressure will intensify: 1) the occupiable vacant housing stock has diminished considerably over the last five years,[28] 2) the maturation of the Baby-Boom generation will not peak until the late 1980's,[29] and 3) private housing production has slowed from 600 units a year in 1970 to 195 units a year in 1980.[30]

A 3.7 percent vacancy rate cannot go much lower - i.e. there aren't many vacant units for the young professionals to pick from. In principle, making some of the existing vacant units habitable for the young professionals would help relieve some of the displacement pressure, but this is not likely to happen given the high cost of substantial rehabilitation and the limitation of capital given the high interest rates and the federal budget cutbacks. As explained in Chapter 2, unsubsidized new construction for the young professionals is also unlikely.

Market Activities and Displacement

To assess which market activity appears to cause the most displacement we (1) estimate the frequency of each market activity, (2) assess the probability of displacement occurring as a result of each market activity, and then (3) rank the market activities in terms of their impact on displacement.

Frequency. The frequency of each market activity can be presented as follows. A total of 4,415 rental units were converted to condominiums between 1970 and 1980, of which 1,930 (43.7%) were converted in 1979.[31] An estimated 3,721 2-4 unit structures (net) shifted from being absentee-owned to owner-occupied.[32] The city experienced a net loss of 6,478 long-term owners (homeowners more than 45 years old) from 1970 to 1980.[33] And the absolute increase in the number of high rent apartments was 8,404.[34]

Potential Displacement

Condominiums. To estimate the potential displacement from condominium conversions, we note that 2,635 of the 4,415 apartments that were converted were low and moderate income housing units, including 722 rooming house rooms.[35] This figure overstates displacement, however, because (1) some of the units that were converted were vacant, and (2) some existing tenants in the converted low and moderate income units bought their unit.[36] We estimate that 133 moderate income units were vacant[36] and 313 households living in moderate income units bought their unit,[37] and we assume that all the rooming house residents were displaced. Consequently, 2,189 or 49.6 percent of the conversions of apartments to condominiums may have displaced the existing low and moderate income tenants.

In trying to estimate who was "displaced" according to our definition, two questions arise. Is a young adult household that does not want to be burdened with the payments and commitment to ownership "displaced"? Is a rental household that would be moving anyway "displaced"? Fifty-nine percent (58.9%) of those tenants who did not buy their converted units were households headed by someone younger than 34 years old, an age group that traditionally prefers to rent.[38] Because Boston's rental housing has an annual turnover rate of approximately 30 percent, we estimate that one-third of these, or 450 households would have moved anyway.[39]

Table III-7[40]

AGE DISTRIBUTION OF TENANTS OF MODERATE INCOME APARTMENTS POTENTIALLY DISPLACED BY CONDOMINIUM CONVERSION

Age	# Potentially Displaced from Moderate Income Apts.
25	275
25-34	605
35+	604
Total	1494

In summary, between 1970 and 1980 1,494 moderate income households chose not to purchase their converted rental units. Of these, 58.9 percent or 880 households were in an age group that traditionally prefers to rent. And considering the annual turnover rate, 450 households may have moved anyway. In addition, tenants of 722 rooming house rooms were displaced, most of whom were over 34 years old. Thus, in total, we estimate the number of households displaced from conversion of moderately priced apartments or rooming houses to condominiums is 2,189 of which 1,326 were more than 35 years old.

Recent developments in condominium conversion strategy exacerbated the displacement potential of conversion. As shown in the following table, more low and moderate income apartments and rooming houses are being converted, more smaller units are being consolidated into larger units, a smaller proportion of the supply of condominiums are being provided through new construction or adaptive re-use, and as a result, fewer existing tenants of converted units are buying their units. Thus, in 1979 alone, 1,281 households living in low and moderate income rental units may have been displaced,[41] which was 58 percent of the households potentially displaced by condominium conversion from 1970 to 1980.

Table III-8[42]

CONDOMINIUM CONVERSION STRATEGY

	% New Construction or Adaptive Re-Use	# units lost to merger	% conversions from low + mod. apartments	% existing tenants purchasing
1969-1973	16.9%	0% (0)	27.5%	32%
1974-1977	20.3%	11.9% (130)	56.5%	30%
1978	35.7%	11.9% (107)	53.6%	19%
1979	10.6%	29.3% (476)	77.25%	13.7%

Turnover of 2-4 Unit Structures. The increased owner-occupancy and transfer of ownership of 2-4 unit structures has the potential of displacing 11,083 low and moderate income tenant households (6,157 buildings transferred times 1.8 tenant households per building).[43] Of the 6,157 transfers of 2-4 unit structures that may have potentially displaced existing tenants, 3,721 were transfers from absentee-owners to owner-occupants[44] and 2,886 were 2-4 unit structures previously owned by long-term owners (homeowners more than 45 years old).[45]

Tenants in 2-4 unit structures, whether owned by a long-term owner-occupant or owned by an absentee landlord, often pay a below market level rent because landlords of small properties may temper rent increases in order to avoid the costs of tenant turnover and because long-term owner-occupants often have a low interest mortgage or no mortgage at all and can therefore afford to charge lower rents. Existing tenants are potentially displaced when these properties are sold, because the sale price is likely to reflect market level rents, not the rents that the existing tenants are paying.

It is very difficult to measure the displacement that occurred because of these sales. We don't know how many long-term owners were keeping rents below the market level, though a study of turnover in Jamaica Plain documented that long-term owners in appreciating neighborhoods were consistently charging below market rents, and long-term renters were forced to move out when the building was sold because the new owner raised rents substantially.[46]

We do know that owners who buy a 2-4 unit structure from a long-term owner or an absentee-owner have substantially higher mortgage costs. The increased housing costs faced by tenants in a 2-4 unit structure that has turned over is similar to the increased cost faced by a tenant whose rental unit was converted to a condominium. (See Appendix J for the comparable cost increases). But the renter in the 2-4 unit structure does not get to offset increased housing costs with the federal income tax subsidies available to homeowners. Nor does the tenant get the benefit of the generally rapid appreciation of the market value of the unit. If only 25 percent of the tenants in the 2-4 unit structures that turned over were displaced because of the increased housing cost caused by the turnover, 2,771 tenants would be affected over the past ten years. This represents substantial displacement when compared to the more publicized displacement of an estimated 2,189 households from the conversion of low and moderate income apartments and rooming houses. If 50 percent of the tenants in housing previously owned by long-term owner-occupants were displaced and 25 percent of the tenants in absentee-owned buildings that turned over to owner-occupants were displaced, then 4,346 moderate income tenants would have been displaced because of turnover.

Increase in High Rent Apartments. The net increase in high rent apartments, (after adjusting for the increase resulting from new construction and the decrease due to condominium conversion), is 7,084.[47] The increase overstates the number of low income households displaced by a large increase in their rent. Some of the rent increases were postponed until the tenant moved, in which case no displacement was involved. Given Boston's annual rental turnover of 30 percent, we expect, at minimum, that 2,125 of the rent increases occurred after the tenant moved. Some of the rent increases may not have displaced the existing tenants because the tenants remained in their apartments and paid the rent increase. In fact, some apartments' shift from a moderate income unit renting for less than $150 in 1970 to a high rent apartment renting for over $300 in 1980 represents an increase in housing cost, not an arbitrary increase in rents.

(Housing costs increased 200-270 percent from 1967 to 1979 while the Consumer Price Index increased 150 percent over the same period.)[48] The increase in high rents also overestimates the displacement of low income tenants, because most of the units experiencing the increase in rent were moderately priced units. Finally, the increase in the number of high rent apartments double counts apartments whose rent increased to the high rent level because of the turnover mentioned above. Understanding the difficulty in making these adjustments, we still feel that large rent increases do not displace as many low and moderate income tenants as do the previously mentioned market activities.

SECTION IV: Conclusion

In summary, we estimate that condominium conversion displaced 722 rooming house boarders and 1,494 moderate income households over the past ten years with most of the displacement in the last two years. Of the displacees, 59 percent were younger than 34 years old, and 450 may have moved anyway. Secondly, more than 11,083 households were threatened by displacement because of turnover of their 2-4 unit structure.[49] Not all long-term homeowners charged below market rents and some of the tenants in the structures were able to "afford" the increase in housing costs, but this figure gives us a sense of the scope of the displacement problem caused by the turnover of 2-4 unit structures. The number of high rent apartments increased by 7,084 over the last ten years. It is difficult to measure the level of displacement associated with this means, however, because rent increases often occur after a tenant has moved out, some tenants remained in their units and paid the rent increase, and some rent increases are caused by housing turnover mentioned above.

Although it is very difficult to determine actual displacement, we conclude that there is considerable displacement pressure from the turnover of the 2-4 unit structures. Indeed, the displacement from turnover may be larger than generally believed. Because the increased housing costs resulting from conversion and turnover are similar, and because housing turnover threatens so many more moderate income tenants than does conversion, we conclude that turnover of 2-4 unit structures is probably the primary source of displacement. Condominium conversion, however, has displaced a significant number of tenants from low and moderate income units and can be expected to displace even more as condominium development strategies shift towards the lower income housing stock on the fringes of the appreciating downtown neighborhoods. Policy makers concerned about displacement should clearly focus their attention on both turnover and conversion.

FOOTNOTES

CHAPTER THREE

1. Massachusetts Institute of Technology. Department of Urban Studies. The Legal Services. Residential Displacement in Jamaica Plain. An unpublished manuscript. Cambridge, MA. 1980.

2. See Supply section for discussion of rents needed to make new construction profitable. (Chapter Two, Footnote #3).

3. The United States Department of Commerce. 1981. The Boston office of the Department of Commerce released population and housing counts on February 5, 1981 over the phone, stating that their population count in Boston was 562,582 and their housing count was 241,194 housing units (1980 figures). Their count was according to the updated, most recent Census count. The 1970 census count for Boston was 641,071 people and 217,722 housing units. SOURCE: The United States Census of Population and Housing 1970. Boston, Massachusetts.

4. Headship rate equals the number of households divided by the population. The 1970 headship rate was calculated from the 1970 Census of Population and Housing and verified by the statistics available from the Boston Redevelopment Authority document, Characteristics of Population: Families and Households, and their Levels of Income, for the City of Boston and the Metropolitan Area, 1960 and 1970 actual and 1980 and and 1985 Projected: Background Tables. August, 1974. P. 1. 1980 headship rate was calculated by dividing population reported by the Census Bureau by the number of households. The number of households was calculated by dividing the household population (total population minus inmates of institutions and others in "group quarters") by the citywide average household size reported by Census in 1980. These calculations are discussed in far more detail in Appendix B. The number of people per household is calculated by taking the household population and dividing by the number of households.

5. See Appendix B.

6. For methodology on age distribution of households, see Appendix C. Sources are given in footnotes of Appendices.

7. For increase in households, see footnote 4 and Appendix C. For documentation of supply of housing units, we used 1970 Census of Housing, housing count by 1980 U.S. Census, and the BRA research available in an

unpublished document by Rolf Goetze, "Boston's Housing in the Eighties: Challenges and Opportunities" and in a report by Bonnie Heudorfer called Condominium Development in Boston, BRA Research Dept. August, 1980. For our calculations, see Appendix D.

8. For documentation of occupancy characteristics of households age 25-34, see Appendix I.

9. For breakdown of supply of private market housing units, see Appendix G. See Appendix footnotes for source of individual components of change.

10. Ibid.

11. 1970 figures come from BRA background tables cited in footnote 2, p. 1. 1980 figures are the previously calculated housing supply and household estimates.

12. See Appendix E for discussion of the amount of vacant units that are private.

13. See methodology in Appendix E which adjusted Census vacancies with the Center for Survey Research's estimated vacancy rate. BRA used "vacant, but structurally sound" as standard in designating a unit vacant. Of those structurally sound units, 4600 were public housing units that the BHA is classifying as "vacant not inhabitable." The BRA definition was obtained via a phone call between Chuck Callans and Karen Buglass on January 14, 1981. The BHA classification was reported in Rolf Goetze's unpublished document "Boston's Housing in the 1980's: Challenges and Opportunities." September, 1980. p. 133-134.

14. Vacancy rate = number of habitable vacant units/number of habitable vacant units plus the number of households. See Appendix B.

15. Housing in Boston: Background Analysis and Program Directions. A Working Paper. June 1974, P. IV-24.

16. Information calculated from Table I-4 from BRA Household Survey in "Characteristics of Boston's Population and Housing: 1980--Background Tables."

17. Ibid. Table I-4.

18. Ibid. Table E-2.

19. Ibid. Table B-1.

20. Ibid. Table B-1.

21. Ibid. Table B-1.

22. Ibid. Table H-1, Table D-1, and Table M-1.

23. Ibid. Table K-1. The city average of number of rooms per unit is 4.5. Back Bay/Beacon Hill units have an average of 3 rooms per unit. Twenty-eight percent of the city's housing units have 3 or less units. 65% of Back Bay/Beacon Hill's units, 64% of Central's units, 43% of the South End's, 85% of Fenway/Kenmore's and 40% of Allston/Brighton's units have less than 3 rooms per unit.

24. Ibid. Table H-3. Note that owner-occupancy did not increase in Charlestown. One hypothesis for why owner occupancy did not increase in Charlestown is 1) there already is a high level of ownership and 2) Charlestown does not have a large supply of small units conducive for conversion for the incoming small professional households like the other neighborhoods do.

25. Ibid. Table B-1.

26. Ibid. Table H-3.

27. Ibid. Table K-4 and Table H-3.

28. See Footnote 13 discussion.

29. "Housing in Massachusetts," Massachusetts Office of Policy Development. 1980. p. 7.

30. Rolf Goetze, Boston Housing in the 1980's: Challenges and Opportunities. An unpublished document. September, 1980. p. 56-63. Private market units include market rate rental units and condominiums.

31. Bonnie Heudorfer. Condominium Development in Boston. September 1980. p. 28.

32. See Appendix G (latter part) and Appendix H.

33. See Appendix H.

34. See Appendix H.

35. Op. Cit. Heudorfer. p. 29-30.

36. The Heudorfer report did not reveal how many units were vacant that were converted. It is difficult to calculate since the figures are not readily available and the unit could be vacant because the tenant left before a survey because he heard his unit was to be converted.

Using the city-wide vacancy rate of 3.6% is conservative considering that the low and moderate income units have high turnover and may have been of poor quality, thereby discouraging tenants from living in the units. Using the 3.67% vacancy rate, we would estimate that 97 units were vacant before the conversion.

Alternatively, we should recognize that of the 1,913 moderate income units that were converted, 22% were substantially rehabilitated. Therefore, we use the city-wide total vacancy rate for units that were substantially rahabilitated and the "occupiable" vacancy rate for all other moderate income conversions. As a result, we estimate that of the 2,635 low and moderate income units that were converted, 133 were vacant (.084 total vacancy rate and .0367 for occupiable vacancy rate).

37. 313 (32.5%) tenants from moderate income tenants in non-downtown neighborhoods bought their condominium. In the downtown neighborhoods we assume that no low and moderate income tenant bought their unit, which necessitates that 36.7% of the tenants in units that had previously been luxury rentals, bought their units. This is a very conservative estimate, but not unreasonable. IBID. Heudorfer, p. 71.

38. Ibid. p. 71. Assume that age profile of tenants displaced from moderate income apartments is similar to age distribution of all tenants displaced because of conversion city-wide.

39. Ibid. p. 62.

40. Ibid. p. 71. Assume 27 of vacant units are rooming house rooms (.0367 x 722 = 27).

41. Ibid. p. 30 and p. 71.

42. There was conversion of 1490 low and moderate income apartments of which 490 were rooming houses and an estimated 144 tenant household in non-downtown neighborhoods bought their unit. Assuming 22% of the moderate income apartments were substantially rehabilitated (8.4% vacant) and 3.67% of the rest of the converted units were vacant, 65 units were vacant. In conclusion, 1490 low and moderate income units and boarding house rooms were converted, 144 tenants bought, 65 units were vacant, and 1281 tenants may have been displaced.

43. 1.8 tenant households per building is the average number of tenant households in a ramdom sampling of 2-4 unit structures. Op. Cit. Household Survey. Table K-4. By multiplying the proportion of structures in the 2-4 unit structure sample that are 2, 3 and 4 unit structures times the number of tenants in each structure, we reach the average number of tenants per structure. (4/30 x 3 + 16/30 x 2 + 10/30 x 1 = 1.8).

44. See Appendix H. We assumed shift from absentee-owned to owner-occupied happened predominantly in 2-4 unit structures because we expect the absentee owners to have been attracted by rental income.

45. Of the net loss of 19,106 long term residents (households), with a head of household older than 45 (see Footnote 33), 6,478 were owners. Of these owner-occupants, 55.45 % owned single family homes, IBID. Table K-4. The rest are assumed to own 2-4 unit structures. 2,886

is a very conservative estimate since it represents the net loss of long term owners, thereby disguising the sale by a long term owner and the aging of an owner to older than 45 years old.

46. Jamaica Plain study. See Footnote # 1.

47. See Appendix H.

48. See Supply Footnotes. Chapter Two. Footnotes # 1, 4, and 5.

49. It is important to remember that both turnover calculations, loss of long term landlords and transfer from an absentee owner to an owner-occupant are net numbers and therefore underestimate the level of turnover substantially. Unfortunately, the data is limited and we must work within its limitations. So, alternatively, we use the available data as an indication of the scope of the problem rather than an accurate accounting.

PART II

THE GOVERNMENT ROLE IN THE HOUSING MARKET

INTRODUCTION TO GOVERNMENT SECTION

Federal, state, and local government have policies that affect the urban housing market. This section examines these effects, intentional and unintentional, and explains how they influence displacement.

Having a much broader tax base that grows with the economy, the federal government is at the top of the three-tiered political system in terms of resources and power. In the housing area, the federal government's principal objectives are to provide decent and affordable housing - rental and owner-occupied - for all Americans. On the supply side, programs such as Section 221D3 and 236 were aimed at the stimulation of private construction of units to be offered to eligible tenants. The rents in these units are substantially lower than the costs which could be incurred by the private builders if there were no government subsidies. On the demand side, programs such as Section 8 enhance the rent-paying or purchasing power of poorer households so that they are better able to afford decent housing in the private market.

As these programs are not tailored to the needs of individual cities, the overall approach seems to lack coherence and vision. While existing federal housing programs have varied effects in the Boston housing market, they differ in magnitude and direction of influence. It is unlikely that Boston-specific problems can be solved by Federal policy changes, but as displacement is becoming a national problem, some attempts at relief may be forthcoming. As the state's involvement in the urban housing market is usually limited, Boston must take the responsibility for the displacement problems and yet is very limited in resources and influence to adequately deal with the strong economic and demographic forces behind displacement pressure.

This section examines the degree of contribution each level of government has made to displacement. First, at the federal level, the tax incentives for ownership are discussed in detail with examples. Then the existing federal housing programs are found to have limited impact on the environment of appreciation and displacement pressure. Second, at the state level, we will discuss the tools for housing market intervention available to the state as well as their historical influence. Last, local government policy is examined with respect to Boston's influence through the use of regulatory tools, such as rent control and condominium conversion regulations to shape the decisions of suppliers. In addition, the city has used its control over federal programs and projects to influence where new investment, new demand, and therefore where displacement pressures develop.

CHAPTER FOUR

FEDERAL TAX POLICY IMPACT ON THE URBAN HOUSING MARKET

The Federal Internal Revenue Code has an undeniable impact on displacement in Boston, largely because it is not neutral in its effects on the financial decisions of housing consumers (the demand side) and investors and developers (the supply side). This section examines these effects in five steps. It:

1. discusses how tax benefits for homeowners help the rich more than the poor,
2. compares the nature and magnitude of tax subsidies to both owners and renters and presents numerical examples to show how an owner is better off than a renter,
3. cites studies that illustrate the potential impacts on the housing market effects of different tax subsidies,
4. examines how inflation, coupled with a pro-ownership tax policy, makes homeownership more attractive than before, and
5. draws several conclusions.

Tax Benefits: Low-Income vs. High-Income Households

Any household which buys its home instead of renting receives the following federal tax benefits:

1. One can deduct both one's local property tax and mortgage interest, given one itemizes one's deductions.
2. One is exempted from paying taxes on the value of housing services one receives as a homeowner. This net imputed rent represents the gross rental value of the home minus all necessary expenses of ownership, including depreciation and insurance.
3. If one sells one's principal residence and buys another home within 18 months, there is no tax on any capital gain. This gain is only taxable to the extent that the sale price of the original home exceeds the new one. Thus, the tax on the capital gain is deferred.
4. If the homeowner is 55 years old or above, he or she does not have to pay any capital gain tax on the profit, up to $100,000, from

the sale of his or her house. As a result, the accumulated postponed capital gain tax on the previous turnover of residential investment is forgone.

Tax savings due to the deferral of capital gain tax on home sales amount to about $1 billion each year for the U.S. over the past few years.[1] This tax provision benefits primarily middle and upper income taxpayers who receive the equivalent of an interest-free loan. Seventy-seven percent (77%) of the benefits went to the homeowners in $10,000 to $30,000 expanded gross income class in 1978.[2] This subsidy alone is not considered to be a strong enough incentive to encourage first-time homeownership for those who lack initial cash for the down-payment because deferral of capital gain can only be realized upon resale of homes. The nature of the subsidy encourages the trading of homes.

Mortgage interest and property tax deductions together increased from $8.7 billion in 1977 to $17.5 billion in 1979.[3] To give some historical perspective, Goode estimated in 1964 that these two tax deductions, along with the exclusion of imputed net rent as taxable income, amounted to about two-thirds of the gross rental value of owner-occupied homes. At 1954-1963 tax rates, the average homeowner is estimated to have realized personal income tax savings equal to 15 percent of annual housing costs. At 1965-67 tax rates, the tax savings offset about 12 percent of the costs. A person with $50,000 income is estimated to realize a tax saving of almost one-third annual housing costs in 1965.[4]

The value of tax subsidies is not the same for all taxpayers. The higher the tax bracket a person is in the more valuable the tax subsidies become. In other words, the individual income tax benefits for homeowners per dollar of imputed net rent, mortgage interest and property tax vary directly with the taxpayer's income level and the applicable tax rate. For example, if two families, one in a 20 percent tax bracket and the other in a 50 percent bracket, own the same kind of house with the same mortgage interest and property tax payments, the same deductions would be worth less to the first family than to the second. If deductions added to $1,000, its value to the first family would be $200 and $500 to the second family.

The following table, as used by Henry Aaron, may help to better illustrate the tax impact on housing costs for different income classes. For example, for tax benefits as a given fraction of the imputed gross rent, the reduction in homeownership costs increases with the tax bracket. Similarly, for a given tax bracket, the homeownership costs decrease further when the tax benefits make up a larger fraction of the imputed gross rent. To put the table into perspective, it should be noted that different tax bracket homeowners are unlikely to live in homes with similar mortgage interest and property tax deductions.

Table IV-1

REDUCTION IN HOMEOWNERSHIP COSTS AS A RESULT OF FAVORABLE TAX TREATMENT, BY TAX BRACKET

In Percent

Tax benefits as fraction of imputed gross rent*	Tax bracket (percent)				
	14	20	30	50	70
One-eighth	1.8	2.5	3.8	6.2	8.8
One-fourth	3.5	5.0	7.5	12.5	17.5
Three-eighths	5.2	7.5	11.2	18.8	26.2
One-half	7.0	10.0	15.0	25.0	35.0
Five-eighths	8.8	12.5	18.8	31.2	43.8
Three-fourths	10.5	15.0	22.5	37.5	52.5
Seven-eighths	12.2	17.5	26.2	43.8	61.2
One	14.0	20.0	30.0	50.0	70.0

*Benefits are the sum of imputed net rent, mortgage interest, and property taxes.

Source: Henry Aaron, Shelter and Subsidies, Brookings Institution, Washington, D.C., 1972

Before condominium ownership became popular low-bracket homeowners tended to live in houses with high maintenance and depreciation costs, and therefore, their tax benefits made up a relatively small fraction of the imputed gross rent. As a result, the percentage reduction in housing costs was very small (i.e. at the upper left of the table). This subsidy was hardly enough to help poor renters become homeowners. On the other hand, the high-bracket homeowners benefitted from a larger tax subsidy as their maintenance costs were low and the tax benefits were higher as a percentage of imputed gross rents (i.e. at the lower right of the table).

While more condominiums have become available in recent years, their generally good physical conditions from renovation or new construction have helped to lower fix-up costs typically incurred in urban owner-occupied units. Assuming the budget for imputed gross rent remains the same, a 20 percent tax bracket homeowner can further reduce his or her housing costs by an additional 2.5 percent as he/she moves into a condominium unit with lower maintenance costs (i.e. tax benefits as a fraction of the imputed gross rent increases from one-eighth to one-fourth as illustrated in the chart). From the tax viewpoint, a condominium is more favorable than a single-family house as a form of urban homeownership because mortgage interest and property tax payments constitute a relatively larger tax benefit and a larger percentage reduction in homeownership costs.

The tax subsidies are regressive, being more valuable to those in higher tax brackets. Benefits run from about 5 percent gross rent in the lowest tax brackets to over 50 percent in the highest brackets. Those with income below exemption receive no benefits. Benefits are also zero for those who do not itemize - generally families in the lower income brackets. In 1972, more than 60 percent of the tax subsidies accrued to families with incomes over $10,000. In 1978, the U.S. Senate's Committee on the Budget estimated that 79 percent of the property tax deduction subsidy and 74 percent of the mortgage interest deduction subsidy accrued to families with expanded gross income over $20,000.[5] Another reason for these tax deductions' regressivity is that as mentioned above, one can take advantage of them only if one itemizes deductions for federal income tax returns and more higher-income households itemize their deductions than low-income households.

The imputed net rent is the implicit current return on the homeowner's equity. A homeowner can be viewed as a business renting housing services to him/herself and deducting interest costs. The income the homeowner gets from this imputed rent is not added to the taxable income even though he/she takes the tax deductions for the costs responsible for creating it. Imputed rent is considered 9 percent to 12 percent of the market price of the house. The benefit of the exclusion of this imputed rent is not limited to the rich who usually itemize tax returns. Poor families who do not itemize can also benefit but this gain is relatively small due to their low tax brackets. To recapitulate:

1. The federal tax laws provide only marginal tax saving to the low-bracket homeowners. Tax benefits increase directly with the income level of homeowners.
2. The federal income tax laws offer no help to poor renters who do not have the means or credit rating to buy a home in the first place.
3. The federal income system provides financial encouragement and aid to homeownership (e.g. condominium housing) for the middle class who have the means to choose between ownership and tenancy.

The third point is of the most interest to the issue of displacement through condominium conversion.

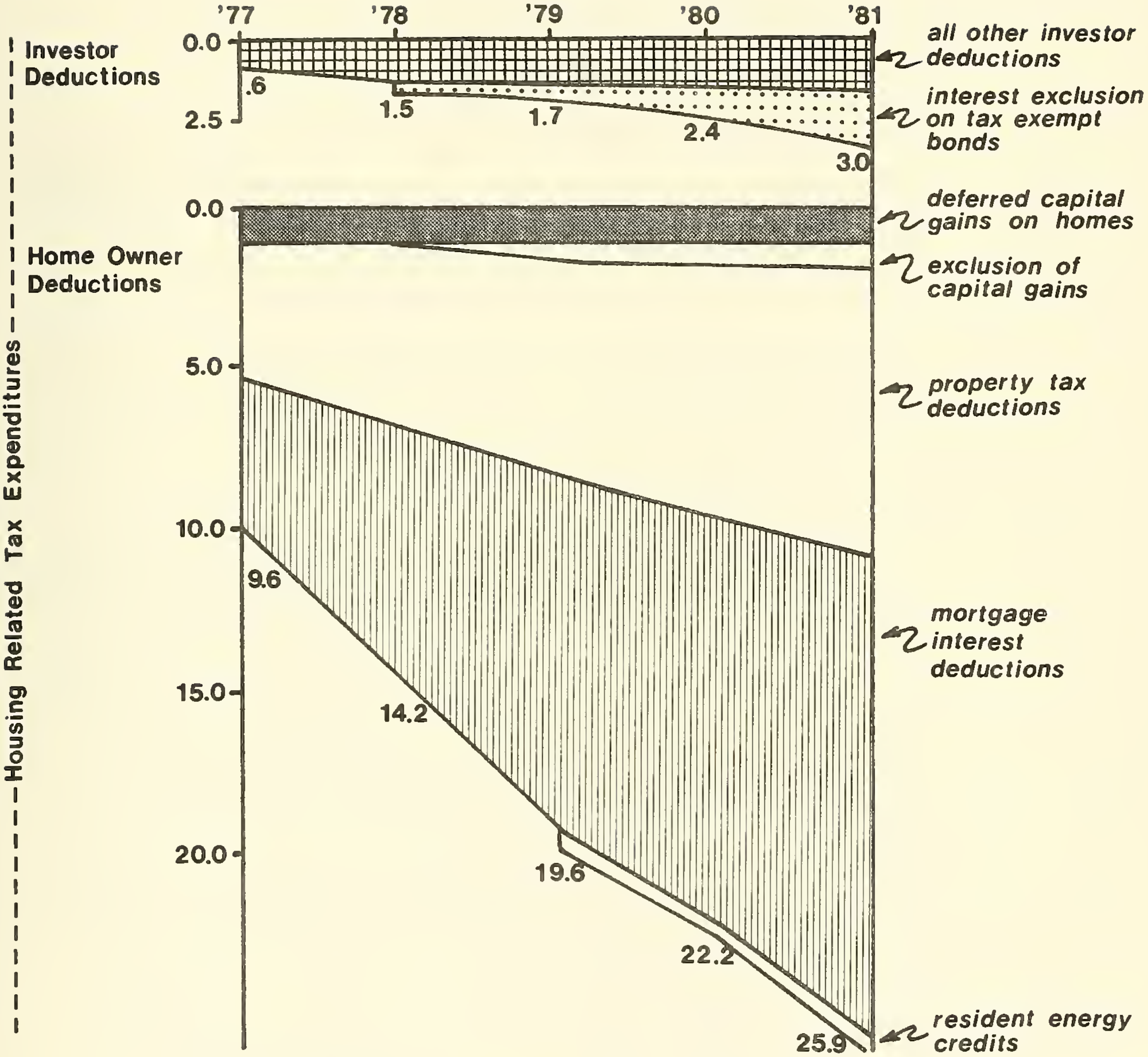
Ownership vs. Tenancy

While the homeownership tax subsidy is common knowledge, renters may also be subsidized indirectly through the tax system. Federal tax law subsidizes the supply of rental housing by allowing double-declining depreciation, based on a useful life of 35 years, to be deducted by the landlord from his/her taxable income. Taxes on excessive depreciation are deferred until the property is sold, or they are forgiven at the investor's death.

These tax treatments try to make supplying rental housing a good investment and may benefit renters. Theoretically, the landlord can pass the savings from the accelerated depreciation schedule on to renters through lower rents. A statistical comparison between housing situations with and without accelerated depreciation estimated that the middle class renters have benefitted from rent reduction by 13 percent with accelerated depreciation tax advantages (as compared to straight-line depreciation at the rate of 1.4 percent a year). In the long run, holding owner subsidies constant, accelerated depreciation was estimated to increase the fraction of renter households by about 8.5 percent in response to this rent reduction. Moreover, the housing quality of each renting household would also increase over 7 percent.

While owner-occupied and rental housing are both subsidized directly and indirectly through the tax system, the following table illustrates that the federal government subsidizes homeowners ten times more than investors in rental housing.

Table IV-2



Source: Rolf Goetze, "Federal Tax Expenditure Should be Restructured to aid Urban Housing," Journal of Housing, Vol 37, number 9, 1980.

Table IV-2 (cont.)

HOUSING RELATED TAX EXPENDITURES, FISCAL YEARS 1977-1981

(dollars in billions)

	1977	1978	1979	1980	1981
Home Owner Deductions					
Mortgage interest on owner-occupied homes	$ 4.5	$ 7.6	$10.7	$12.5	$14.7
Property tax on owner-occupied homes	4.2	5.5	6.8	7.7	9.0
Residential energy credits	-	-	.7	.5	.5
Deferral of capital gains on home sales	.9	1.0	1.1	1.0	1.1
Exclusion of capital gains on home	-	.1	.3	.5	.6
Sub-Total	9.6	14.2	19.6	22.2	25.9
Investor Deductions					
Expensing of construction period interest and taxes	.2	.6	.6	.7	.7
Excess first year depreciation	.1	.2	.2	.2	.2
Depreciation on rental housing in excess of straight line	.1	.4	.4	.4	.4
Five-year amortization for rental housing rehabilitation	-	-	.02	.02	.03
Preservation of historic structures	-	-	.02	.04	.07
Exclusion of interest on state and local housing bonds	-	.3	.5	.8	1.6
Sub-Total	.6	1.5	1.7	2.1	3.0
Total (housing related tax expenditures)	10.2	15.7	21.3	24.3	28.9
All federal tax expenditures		133.9	158.0	176.9	203.4
Housing as a percent of total		11.7%	13.4%	13.8%	14.2%

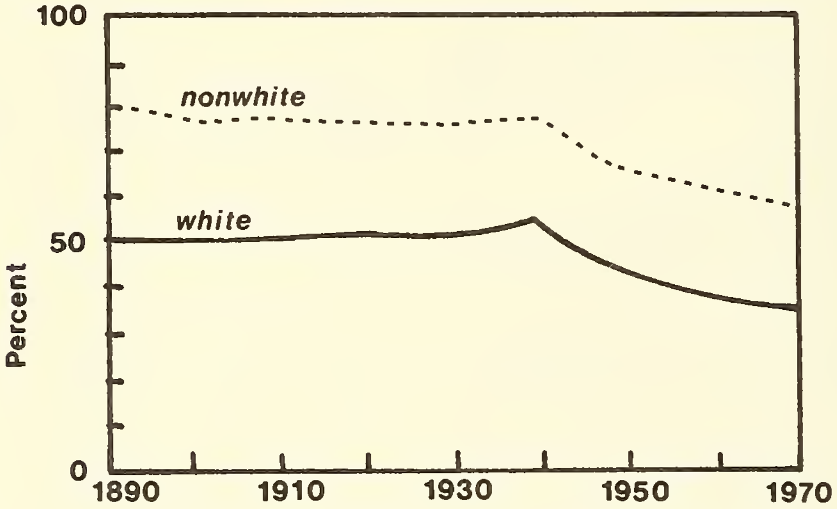
Note: Tax expenditures are defined in the budget as "losses of tax revenue attributable to provisions of the federal income tax laws that allow a special exclusion exemption, or deduction from gross income or provide a special credit preferential rate of tax, or a deterral of tax liability affecting individual or corporate income tax liability."

Source: Based on data compiled by Low Income Housing Information Service from Special Analysis budget from United States government, 1980, 1981.

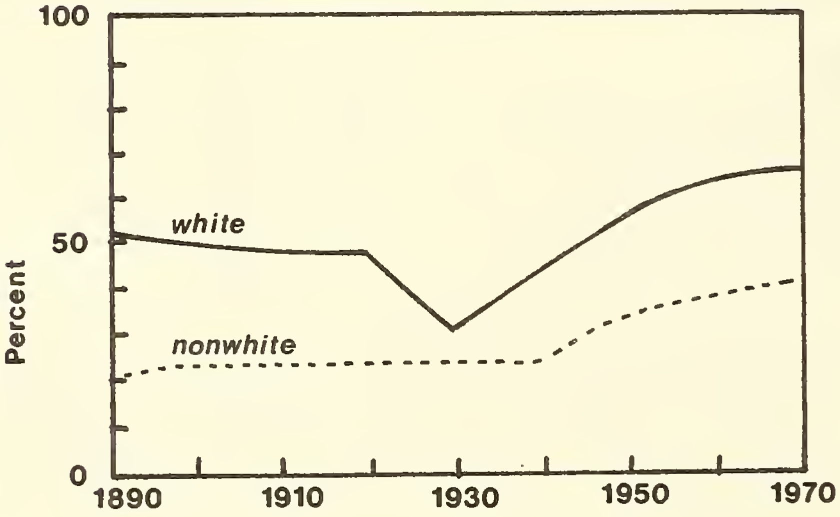
Table IV-3

Occupancy of Rental and Owner-Occupied Housing, by Race, 1890-1970

A. Rental Housing --------



B. Owner-Occupied Housing ---



The fact that the percentages of homeowners has increased over the past few decades also suggests that the federal tax policy is more pro-ownership than pro-tenancy. Rosen and Rosen have estimated that 25 percent of the growth in the proportion of homeowning families, since World War II, is due to these tax matters.[6]

Since there is no deduction for rent or its components (interest and property tax), rent is paid from income after tax. Homeowners pay for housing from before tax income because deductions lower the effective tax rate. If r is the appropriate income tax rate, a rental payment of x dollars thus needs pre-tax income of $\$(\frac{x}{i-r})$. As Table IV-4 indicates, a \$1,000 rental payment costs a richer couple more pre-tax income than a poor one. Since mortgage interest and property taxes are both a significant percentage of housing costs and deductible, the homeowner can (1) spend more on housing than a renter with the same income, or (2) receive better housing services while spending the same on housing as the renter. As income rises, it becomes increasingly expensive for one to rent relative to own, because the cost of the foregoing the tax advantages of deductions and future capital appreciation increases with income.

Table IV-4
PRE-TAX INCOME NEEDED TO AFFORD $1000 OF RENT, AS A FUNCTION OF TAXABLE INCOME AND THE MARGINAL TAX RATE

Taxable Income	Marginal Tax Rate (Married couple)	Pre-Tax Income for $1,000 of rent
$ 1,000	15%	$1,176
4,000	19	1,235
12,000	25	1,333
20,000	32	1,471
24,000	36	1,563
32,000	42	1,724
40,000	48	1,923
52,000	53	2,128
120,000	64	2,778
200,000	70	3,333

To illustrate the nature and magnitude of the homeowner's benefit over the renter's, the following example assumes that households A and B each have a pre-tax salary income of $36,000 and $10,000 savings. Household A buys a home worth $53,500 using its savings for the downpayment. Household B rents a similar home at an annual rent of $6,720 and invests its savings at an assumed annual rate of 10 percent. The mortgage for the home is assumed at 15 percent for 25 years.

Table IV-5

ADVANTAGE OF OWNERSHIP OVER RENTAL HOUSING FOR HOUSEHOLD

	Household A			Household B		
Taxes						
Salary Income	36,000			36,000		
Interest income	--	36,000		1,000	37,000	
Deductions						
Other deductions	2,000			2,000		
Mortgage Interest	6,425			--		
Property Tax	1,820	10,245		--	2,000	
Net Income		25,755			35,000	
Personal Exemption		2,600			2,600	
Taxable Income		23,155			32,400	
Income Tax		8,336	(36% bracket)		13,628	(42%..)

Advantage A over B: 13,628-8,336 = $5,292

Cash Flow - Disposable Income				
Total Income		36,000		37,000
Less:				
Income Tax	8,336		13,628	
Mortgage Payment (including property tax)	8,450		--	
Annual Rent	--	16,786	6,720	20,348
Disposable Income After Tax and Out-of-Pocket Expenses		19,214		16,652

Advantage A over B: 19,214-16,652 = $2,562

As the table shows, Household A saves $5,292 in taxes over Household B. Furthermore, Household A has $2,562 more disposable income than Household B. This difference is equal to the tax differential ($5,292) minus the excess of the mortgage payment and property tax over the rental payment ($7,950-$6,720 = $1,230) and the income to Household B on its $10,000 investment ($1,000).

In the example, the deduction of mortgage interest and property tax is worth $2,968 to Household A at 36 percent tax bracket. However, this deduction value will increase to $3,793 if another household is in a higher tax bracket of, say, 46 percent.

In addition to favorable tax treatment, Household A, unlike B, may also benefit from future capital appreciation. Because the gains are based on house value, they may be quite large relative to the household's equity. To summarize:

1. The federal tax policy subsidizes housing both in ownership and tenancy.
2. The tax policy provides stronger incentives to own than to rent.
3. As income rises, the ownership incentive becomes stronger due to higher marginal tax rate.

Housing Market Effects

Despite its pro-ownership incentives, the federal tax law alone, which has been in place for the past three decades, is not enough to explain the recent problem of displacement. To understand the link between income tax provisions and displacement, one must first understand the impact of these provisions on the housing market in general.

Most analysts agree that the price elasticity of demand for housing, the percentage by which the quantity of housing purchased reacts to a 1 percent change in the price of housing, is between 0 and -1. Thus, tax benefits which lower the after-tax price of housing by 10 percent increase the demand for housing by a maximum of 10 percent. This increased demand has two effects. First, it tends to push up the before-tax price of housing. Second, it leads to an increase in the quantity of housing consumed by owner-occupants. This increase is greatest in higher income tax brackets.

What would happen if federal tax laws no longer allowed these deductions? Demand for owner-occupied housing would decrease and so would the price of the house. Frank DeLeeuw and Larry Ozane estimated that the price of a house would fall over 9 percent if mortgage interest could no longer be deductible from federal income taxes. This policy would decrease the percentage of owner-occupant households by 3 percent (and increase the number of renter households by the same amount). The average amount spent on housing per owner-occupant would fall almost 8 percent.

DeLeeuw and Ozane also estimated that if imputed rent were included as taxable income, then the price of a typical home would fall over 14 percent, the amount spent on housing would fall 16 percent per owner-occupant household, and 6.5 percent fewer households would be homeowners.[8]

If both these tax subsidies were eliminated, the demand for rental housing would rise and the rents would increase. DeLeeuw and Ozane estimated that rents would climb between 11 and 24 percent.

It should be remembered that the price of owner-occupied housing is higher because of the tax benefits to owner-occupied housing. This higher price partially offsets the tax benefit. In other words, market has adjusted for those tax deductions. If all households were alike with the same income and taste, the market would presumably adjust until they were indifferent between owning and renting. But households are not all alike. Thus at some income bracket, the market adjusts to the point where average households would become indifferent but all richer households would prefer owning.

Up to this point, the fundamental question of whether the pro-ownership tax incentives have caused displacement still remains unanswered. We have shown that pro-ownership tax provisions do increase the demand for owner-occupied housing, including condominiums. But these tax provisions, which have not changed significantly in recent years, cannot by themselves account for the recent increase in the demand for ownership. This point can be illustrated by a comparison between Boston and Toronto. These two cities are both major developed cities with scarce available land, a high concentration of young people, rent control, an inflationary economy and a downtown revitalization interest. But condominium conversion and renovation also prevail in Toronto despite the fact that property tax and mortgage interest have never been deductible under Canadian tax law.[9] Other aspects of Canadian tax law, such as deferral of capital gain on principal residence and the exclusion of imputed rents, are very similar to U.S. tax law, however. Because displacement is a recent phenomenon, this comparison suggests that one should look at factors that have changed recently to determine the causes of displacement. The U.S. pro-ownership tax policy, which has existed for many years, cannot by itself be sufficient to account for the recent problem of displacement.

Inflation

The key to the recent increase in the demand for homeownership lies in the interaction between inflation and the income tax. Let us use an example to illustrate the nature and magnitude of the benefits inflation may bring to homeowners. The following table compares the cost and benefit of condominium ownership of Household A under different inflation rates and tax brackets. The table also attempts to separate out the different economic effects of inflation and the tax benefits in homeownership, and postulates that inflation alone without the allowable tax deduction can provide a strong enough incentive for investors to increase their demand for ownership, and consequently may case displacement.

As described earlier in an example, Household A owns a $53,500 unit which requires a $10,000 down-payment and a 25 year mortgage at 15 percent. The example assumes that the price of the unit and ownership costs (namely the property tax, condominium maintenance fees and utility payments) increase at the same rate as inflation. At a constant mortgage payment and escalated inflation rate, the "operating leverage" works effectively to enhance the market value of the real asset.

Table IV-6

COSTS AND BENEFITS OF OWNERSHIP AS A FUNCTION OF INFLATION AND TAX BRACKET

		(inflation rate)			
		0%	5%	10%	15%
A. **First Year Costs**					
property taxes		1800	1911	2002	2093
mortgage interest		6425	6425	6425	6425
opportunity cost of foregone interest		1000	1000	1000	1000
condominium fee		1200	1260	1320	1380
Total Costs		10425	10596	10747	10898
B. **First Year Benefits**					
price appreciation		0	2675	5350	8025
*tax deductions	@ 20%	1845	1867	1885	1904
tax rates	@ 30%	2768	2801	2828	2855
	@ 40%	3690	3734	3771	3807
	@ 50%	4613	4668	4714	4759
Total benefits	@ 20%	1845	4542	7235	9929
	@ 30%	2768	5476	8178	10880
	@ 40%	3690	6409	9121	11832
	@ 50%	4613	4668	10064	12784
C. **First Year Economic Cost** (A-B)					
marginal tax rates:					
	@ 20%	8580	6054	3512	969
	@ 30%	7657	5120	2569	18
	@ 40%	6735	4187	1626	-934
	@ 50%	5912	3253	683	-1886
No tax deduction: (i.e. total costs--price appreciation for 20%-50% tax rate)		10425	7921	5397	2873

* Tax deductions include mortgage interest, property tax and interest income foregone on downpayment.

According to Table IV-6, the first year economic cost to Household A in each tax bracket decreases with inflation. This is because the price appreciation can more than offset the rise in operating cost of the unit. The table also reiterates an early point that households with higher income pay less for the same housing unit at a given inflation rate. High inflation combined with high tax bracket can result in a minimal economic cost of housing for the rich. For example, a household in the 50 percent tax bracket under 15 percent inflation rate ends up gaining from homeownership (i.e. -$1,886 economic cost).

Table IV-7

MARGINAL SAVING FROM TAX DEDUCTION

Tax Rate	$(0% inflation rate)	$(5%...)	$(10%...)	$(15%...)
@ 20%	1849	1849	1849	1849
@ 30%	2774	2774	2774	2774
@ 40%	3698	3698	3698	3698
@ 50%	4623	4623	4623	4623

Table IV-7 shows that at any inflation rate, the marginal saving from tax deduction provision (as compared to without deduction) increases with the tax bracket.

Table IV-8

MARGINAL SAVING FROM INFLATION

Inflation Rate	$(20% tax bracket)	$(30% tax bracket)	$(40%...)
@ 0%	0	0	0
@ 5%	2504	2504	2504
@ 10%	5028	5028	5028
@ 15%	7552	7552	7552

Table IV-8 shows that a household would have a greater savings with higher inflation regardless of its tax bracket.

Table IV-9

THE INTERACTIVE EFFECT OF INFLATION AND TAX DEDUCTION

ECONOMIC COSTS	(1) tax deduction without inflation	(2) 10% inflation without deduction	(3) tax deduction with 10% inflation
Income at tax rate			
20%	8580	5397	3512
30%	7657	5397	2569
40%	6735	5397	1626
50%	5912	5397	683

To understand the impact of recent inflation on ownership behavior, one must recognize the interactive effect of inflation and tax deduction in reducing the ownership cost. As Table IV-9 shows, inflation increases the incentive to be a homeowner, especially for high-income households, by further reducing the economic cost of ownership. For a household at a 50 percent bracket, 10 percent inflation can lower the ownership cost by $5,229 from $5,912 to $683. This saving is the most fundamental driving force behind displacement. Although the appreciation of house prices will not be realized until the unit is sold, many households prefer this accumulation of wealth through home investment to hedge against inflation. Moreover, the federal tax law also allows the deferral of capital gains on principal residence upon sale in most cases.

The foregoing example clearly shows that inflation increases the incentives for ownership. We will next discuss the behavior of the young population towards inflation in light of the growing evidence that ownership is a good investment.

In the latter half of the 1970's, Boston has seen the most rapid rate of consumer price escalation since the war. During the same period, Boston also has experienced a dramatic increase in its 25-34 age group, from 12 percent of the population in 1970 to 20 percent in 1980. Furthermore, more single women are now able to borrow to buy homes (especially relatively lower priced condominium units). As wage growth pushes household income into higher tax brackets, this young middle class has become increasingly aware of the available tax shelter created through homeownership. As mentioned in the demand section, Raymond Struyk has found that the young white husband-wife household type is very responsive to tax subsidies which affect real income, controlling for income, family composition and peer group effects.[10] This household type is also found to have the highest income elasticity of demand for ownership. In other words, this young household group is most likely to become a homeowner whenever its income rises or the real price of housing (after deductions) declines, or both. Given that there are more young households in Boston, combined with the fact that they are now more willing to own, may help to explain the strong demand for condominiums.

The strong demand for ownership is expected to bid up house prices. A recent study examines the effect of inflation on home prices. The greater the rate of inflation in relation to the mortgage interest rate, and the higher the tax bracket of the owner, the more home investment pays off. DeLeeuw and Ozane estimate that when the rate of inflation increases from zero to six percent, the demand for owner-occupied homes will rise, forcing up the price by 7.3 percent if mortgage interest rates fully reflect the current inflation rate.[11] If interest rates rise only half as much as inflation, then house prices will rise approximately 17 percent due to stronger demand. If high rates of inflation are expected in land and structure prices then prices could rise by 38 percent.

On the other hand, inflation is not as favorable to rental housing as it is to owner-occupied housing. The depreciation landlords take on rental housing is based on historical cost rather than current costs so its value falls during inflation. The existing gap between the tax treatment of owner-occupied and rental housing enlarges during periods of high inflation.

While inflation increases the demand for ownership and pushes up the house prices, a home is increasingly recognized to be an item of consumption and an investment. For example, Hendershott and Hu found that people have earned, on average, about 9 percent more annually from being homeowners than investing in other financial assets from 1964 to 1978.[12] Goldman, Sachs & Co. estimated that the anticipated rate of return on homes after 1979 would be about 14 percent.[13] Feldstein and Summers have found investment in manufacturing and other nonfinancial corporations becomes more unattractive relative to real estate under inflationary pressure.[14] It is because the effective tax rate has risen by about one-half less than the rate that would be paid in a non-inflationary environment based on the tax rules on depreciation and inventory accounting procedures.

In summary, general price inflation can increase demand for ownership. As homeownership becomes a more attractive investment under inflation, more people take advantage of this hedge to protect their wealth. An increasing consumer price level reinforces the ownership psychology among wage earners and thus escalates the demand for ownership.

Conclusion

Displacement through condominium conversion reflects the underlying fact that there is an ever stronger tendency in recent years for an average young middle-income household to invest in homeownership, 1) as a hedge against perceived prolonged inflation and 2) to take advantage of the tax benefits which have grown thanks to 'inflated' marginal tax rates. Because of the high cost of construction of owner-occupied housing in desirable locations, converting rental units into condominiums is the principal means of meeting this demand for ownership.

Due to inflation, more people tend to take advantage of the long available tax benefits. In this context, the federal tax policy alone is not sufficient to cause displacement, but turns out to play a major role in an inflationary environment. The expectation of high inflation is primarily responsible for contributing to displacement, and the effect is accelerated by the pro-ownership tax policy. However, it is unclear how much displacement would have occurred in Boston under a tax system neutral to tenure choice, *given the economic and demographic changes outlined in previous chapters*. With high inflation and the increased number of well-to-do young households in Boston, some displacement would have occurred with neutral tax policy. But current tax policy and its interaction with inflation are clearly the strong underlying causes of displacement.

FOOTNOTES

CHAPTER FOUR

1. Low Income Housing Information Service. Special Analysis of the Budget of the United States Government. 1980.

2. The U.S. Senate's Committee on the Budget. Washington, D.C. 1978.

3. Op. Cit. Low Income Housing Information Service.

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7. Frank DeLeeuw and Larry Ozani. "The Impact of the Federal Income Tax in Investment in Housing." Survey of Current Business, December, 1979.

8. Op. Cit. DeLeeuw and Ozani.

9. Housing Ontario. Ontario Ministry of Housing, September 1978 and November 1980, Canada.

10. Raymond Strange, Urban Homeownership: The Economic Determinants. Lexington, Mass. Lexington Book.

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12. Patric H. Hendershott and Sheng Cheng Hu, "Inflation and Extraordinary Returns on Owner-Occupied Housing: Some Implications for Economic Stability and Efficiency." Paper presented at the Conference of Housing Prices and Inflation; Washington, D.C. April 1980.

13. Gary Wenglowski and Richard Worley. "Are Single-Family Houses Overpriced?" New York. Goldman, Sachs, & Co.

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CHAPTER FIVE

THE ROLE OF FEDERAL HOUSING PROGRAMS IN DISPLACEMENT

The main processes of displacement described in previous chapters are condominium conversion, turnover of 2-4 unit structures, and rents rising faster than tenants' ability to pay. The preceeding chapter described the role of federal tax policy in the first process - by influencing the financial decision of potential homeowners. This chapter examines the relationship between federal housing programs and displacement, through their effect on the aggregate supply of housing in the rental market. Based on the premise that displacement in appreciating neighborhoods is caused by the interaction of the supply and demand for rental units within a particular neighborhood, rather than the aggregate supply and demand in the entire city, we conclude that federal housing programs have done little to cause or prevent displacement. Nevertheless, a discussion of the programs' influence on the aggregate supply of rental housing is warranted: if there are fewer options (i.e. affordable private rental units or subsidized housing) for low-income households outside of their neighborhoods which are in the process of appreciating, more of these households would have no choice but to remain in these neighborhoods, where they may eventually be displaced. Federal housing programs also are important in a discussion about displacement, because they offer the potential for relief to the displaced families. Whether displaced families should receive priority over other households eligible for subsidized housing is a complex policy question beyond the scope of this report.

This chapter is organized as follows:

1. a brief overview of the major housing programs and their mechanisms,
2. the link between federal housing programs and displacement through their effect on the aggregate supply of rental units,
3. a focus on three federal housing programs.

Overview of Programs

The relationship of federal housing programs to displacement in

Boston can be inferred through an analysis of their mechanisms and performances. Two of the primary objectives of federal housing policies have been 1) to encourage homeownership for moderate and low-income households, and 2) to provide adequate physical shelter for the poor. Major programs with the first objective are FHA mortgage insurance and Section 235 mortgage subsidy; those with the second objective are public housing, Section 236 and Section 221 mortgage subsidies for rental units. In the early 1970's, two types of Section 8 subsidies were developed: the "new construction/substantial rehabilitation" option, which guarantees rental income to landlords or developers for specific units, and the "existing housing" option, which directly subsidizes the poor by paying them the difference between actual housing cost and 25 percent of their income.

As can be seen from the chart, all these programs vary in the mechanisms they use to lower housing cost, and consequently, the household income levels which benefit from the assistance. For example, public housing and Section 8 "existing housing" subsidies tend to help the poorest of the low-income households, while the FHA mortgage insurance and Section 235 (revised) mortgage subsidy help the upper range of the low-income households.

The early federal housing programs all had good, quick starts in providing a great deal of housing, but by the early 70's, many had run into serious problems of one sort or another. The problems ranged from obsolescence of the FHA mortgage insurance, to the inability of the Section 235 recipient-homeowners to meet monthly payments escalated by rising operating expenses, to the management and morale problems in public housing, to the mismanagement of Section 236 rental projects by investors only interested in the tax shelter benefits. Defaults were high in certain programs.

As mentioned above, we are only interested in those programs which involve the rental housing supply, more specifically, public housing, privately-owned subsidized housing, and Section 8 subsidies.[1] Before focusing on these programs, we will discuss the link between housing programs and displacement in Boston in the next section.

Table V-1

FEDERAL HOUSING PROGRAMS

Program	year originated	supply- or demand-side program	1977 average income level served	1976 average income per unit	Mechanism
FHA Mortgage Insurance	1930's	D			Longer term, lower downpayment, level debt service -- lower monthly payments. Broaden market for conventional loan
Section 235 original	1968-1973	D	$8,805		Eligible households would pay as low as 1% effective rate on their home mortgages and HUD makes up the difference; no downpayment
Section 235 revised	1975	D	$11,532		Effective rate of interest raised to 4%. Minimum downpayment equal to 3.5% of purchase price
Public Housing	1930's	S	$3,690	$3,456	Tenant only to pay rent and utility up to 25% of income
Section 236	1968	S	$6,235 (with supplement) $10,000	$3,401	Interest subsidy paid to developer to reduce rental to 30% of income for eligible families; accelerated depreciation allowed
Section 221 (d)(3)	1961-1970	S			A 3% mortgage loan is given to the developer by the lender, then the mortgage is purchased at face value by FNMA
Section 8, new construction/rehab	1974	S	$4,376	$3,766	Developer to receive FMR from HUD, while tenants pay 25% of their income into maintenance fund; project must have 30% "very poor" tenants
Section 8 existing housing	1974	D	$3,506	$1,456	HUD paid to tenant the difference between FMR and 25% of the tenant's income.

Source: Tables from Federal Housing Policy: Current Programs and Recurring Issues, Chapter 3

Federal Housing Programs and Displacement

The supply of rental housing is a component of any analysis of federal housing programs and displacement. If there were enough rental units, there would be less competition between new young professional households and existing low-income residents - and hence less displacement. While it is certainly true that displacement pressure on a low-income household would be eased when there are enough affordable housing alternatives for relocation, we can also go one step backward in time and say that displacement would be avoided if such a household, contemplating moving out of the neighborhood before the appreciation began, could find affordable housing outside of the neighborhood. There are, of course, some low-income households who have strong attachment to their neighborhoods and would stay until they were eventually displaced. However, for those households who do want to move out (for reasons that might not be related at all to the potential displacement conflict), a shortage of affordable rental units outside of the neighborhood would certainly limit their ability to do so. In light of this line of reasoning, the link between federal housing programs and displacement lies in their effects on the supply of affordable private rental units and subsidized units. In the past decade, the decreasing number of private rental housing affordable to the poor and limited production of low rent housing through public programs have in effect limited the outward mobility of those low-income households in the appreciating neighborhoods. Thus, greater production of publically assisted housing would have lowered, but by no means eliminated, displacement.

A. Private Rental Market. Despite an overall decline in population, housing demand in Boston increased during the 1970's by 10,180 units (households) because of the influx of young people into the city and the maturation of the city's Baby-Boom generation. Meanwhile, the overall supply of housing, both rental and owner-occupied, public and private, increased by only 9,900 units. In the rental market, while 23,100 units were added to the stock, 18,215 units were removed through condominium conversion (4,415), demolition (10,700) and conversion back to owner-occupancy (3,100), resulting in a net gain of 4,885 rental units in 10 years.

When the rental market is divided in private and public, it can be seen that competition in the private rental market is particularly intense. Of the 23,100 new units added to the overall rental stock, 86.6 percent were provided through federal housing programs. High land and construction costs, shortage of capital, and high interest rates during the 70's had stagnated the housing industry and prevented many developers from producing any housing without any aid. As a result, subsidies from the federal housing programs, given these economic factors, encouraged a shift of limited capital resources from the production of private housing to the production of subsidized housing. During the 70's, only 3,100 units of private rental units were built; a high percentage (71 percent) are luxury units located in Back Bay/Beacon Hill, the Central District, the North End and the Waterfront, while the rest are located in middle-income neighborhoods such as West Roxbury, Brighton and Hyde Park. In addition to the fact that few new rental units affordable to the low-income household were produced in the 70's, many existing affordable rental units were lost at the same time through demolition and condominium conversion, as mentioned above. It is evident from these figures that in the private rental market, the private market cannot be counted on to meet the housing needs of low-income city residents.

B. The Public Rental Market. Because of their limited options in the private rental market, more and more low-income households look to the government to meet their housing needs. Indeed, a substantial amount of subsidized rental housing was provided by federal housing programs during the last decade. In 1970, Boston had nearly 22,000 housing units under public assistance, about one-tenth of its stock. By 1980, this assisted inventory increased over 90 percent to 42,000 units, representing 18 percent of the city's 1980 housing stock. Nevertheless, there is still an unmet demand for subsidized housing.

While better than two-thirds of Boston's residents are eligible or in need of housing assistance, only one in ten received aid.[2] Causes for this widening gap are:

1. As real personal income lags behind inflation, an increasing number of low-income households on fixed incomes become eligible for or need housing assistance.

2. Due to high construction costs, it now takes a large subsidy just to produce a few assisted units, thus rendering federal housing assistance less and less effective.
3. As the programs are extended to poorer families, greater subsidies are needed for each family, thus leading to fewer households assisted with the same level of funding.
4. Within the stock of 42,000 units of public assisted housing, many are taken out of use because of poor maintenance or financial troubles, thus distorting the true number of housing units provided through federal housing programs.

In the next section, we will examine the fourth item more in detail by focusing on three major federal housing programs which provide low-income rental housing: public housing private-owned subsidized housing, and Section 8 subsidies. Certainly, if the troubled units were put back into the public rental market, more low-income households, who had intended to move out of appreciating neighborhoods even before the conflict began, would have a higher success of doing so, and some potential displacement would have been prevented.

Three Major Federal Housing Programs

A. Public Housing. Public housing is the oldest, and was until the 1970's, the largest housing program for the poor. In Boston, between 1938 and 1970, 15,200 units of public housing were built, representing 69 percent of the total number of public assisted housing in the city. During the past decade, the stock of public housing increased by 10 percent to 16,700 units, while private rental housing stock in Boston decreased 12.7 percent. Nevertheless, the numerical increase is not an accurate indication of the ability of the program to provide more rental units for the poor, for at least 4,600 units are uninhabitable.[3]

Physical deterioration, lack of security, vandalism, social stigma, and poor management have caused many units to be vacant. In 1970, a review of Boston's first year's experience with the HUD regulations, which required applicants to take places in one of the three high-vacancy locations (considered "bad projects" by all) or else be dropped to the bottom of the substantial waiting list, showed that about two-thirds of all applicants offered such places rejected the offer.[4] Nevertheless, present long waiting lists for the better projects indicate that more rental units for the low-income are needed, and that public housing represents a viable housing option for low-income households only when the units are maintained.

B. Privately-Owned, Subsidized Housing. Privately-owned, subsidized multi-family rental housing constituted a sizeable share of Boston's housing stock increase during the 1970's (especially in the late 70's) - Boston's 1970 stock of 6,800 subsidized units tripled to 24,300 units in 1980. While it was originally believed that the below-market interest rate mortgage financing alone would result in affordable housing for the low-income, it became apparent in the mid-70's that many of the subsidized units were in financial trouble. Presently, more than 6,000 subsidized units (27 percent) are in the process of HUD foreclosure/disposition. The causes for financial failure have been (1) the spiralling operating expenses in the 70's, and (2) the inability of landlords to raise rents high enough to meet expenses due to rent control and HUD guidelines. Additionally, 4,200 units (19 percent of subsidized units) only survived through the granting of Section 8 subsidies to cover operating expenses. Given the present number of viable subsidized rental units, only one out of five eligible households in Boston can be served.[5] This limit indicates again the difficulties a low-income household contemplating on moving, would have in finding another affordable unit elsewhere.

C. Section 8 Subsidies. Soon after its initiation in 1975, Section 8 dominated the assisted housing programs. Between 1975 and 1979, Boston used Section 8 funds to provide over 11,000 housing units for the low-income. In approximately the same period, 1975-80, public housing increased by only 1,000 units; under the subsidized housing programs, the 1975-80 increase was 9,400 units. Instead of targeting new construction, over 50 percent of the Section 8 allocations were used for: saving distressed subsidized units (37 percent), residential rental rehabilitation (8 percent), and allowing tenants to find housing in the existing stock (10 percent).[6] This strategy helps preserve the existing rental stock. A further advantage is that more households are served through these allocations, as compared with the costlier "new construction" Section 8 subsidies.[7] Nevertheless, the present level of Section 8 funding is inadequate in maintaining remaining subsidized units that are near default - in order to recycle the rest of the HUD distressed units, 6,000 units of Section 8 are needed, but Boston only gets about 2,000 units annually. On the other hand, while much of the current Section 8 allocations are used to maintain the present supply of subsidized units in the city, even more capital is needed to produce additional rental units through new construction and substantial rehabilitation of abandoned properties in order to expand the options of low-income families in their search for affordable housing in an already tight rental market.

Conclusion

From the above discussions, the link between federal housing programs and displacement lies not so much in what the federal government has done, but what it has not done. It can not be said that these programs caused a shift in resources from private to subsidized housing, since the dominant causes were economic factors, which suppressed the overall construction of housing. Clearly, without subsidies, the total quantity of housing would have been even lower - the loss of rental housing due to trends in the private sector was partially counter-balanced by production of subsidized housing which lowers the demand for private housing to some degree.

Nevertheless, the link between federal housing programs and displacement lies in the fact that the federal housing programs provide low-income households with housing options where they cannot be displaced by appreciation. Because of the limits on these programs, many low-income households remain in private market units in appreciating units where they will eventually be displaced.

In the following chapters, we continue the examination of the effect of government policies on displacement with analyses of state and local programs.

FOOTNOTES

CHAPTER FIVE

1. While the FHA mortgage insurance would encourage homeownership, its effect on displacement due to condominium conversion is small because of the program's low volume and its concentration in declining neighborhoods. The FHA homeowner mortgage insurance accounted for 20% of the new home mortgages annually in the '50's, but its impact is much reduced (due to competition from private companies) to account for only 5% in the mid-70's. For Boston, between 1976-78, while the number of conventional 1-4 family loans granted nearly doubled, the number of FHA insured loans declined by 30%.

2. Op. Cit. Goetze, p. 46.

3. These 4,600 units are cited as "vacant, not habitable as of January 1979" in Rolf Goetze's article. This figure, however, does not represent the increase of such units between 1970 and 1979. Some of these 4,600 units might have always been uninhabitable through bad design or environment. (See Appendix E).

4. Peattie, Lisa. Conventional Public Housing. Harvard-MIT Joint Center for Urban Studies. Working Paper #3. 1980.

5. All figures drawn from Rolf Goetze's unpublished article, "Boston's Housing in the 1980's: Challenges and Opportunities." 1980.

6. Ibid.

7. Average costs for different types of Section 8 allocations:

New construction	$ 5,400 –$11,000/yr.
Residential Rehabilitation	$ 5,400/yr.
Existing Housing	$ 2,400 - $ 3,960/yr.
Distressed rehabilitation	$ 4,000/yr.

Source: Federal Housing Programs.

CHAPTER SIX

THE ROLE OF STATE GOVERNMENT

The state's influence on displacement in Boston is minimal. At most, the state takes a passive role in influencing the market forces that fuel displacement. For example, the state passed condominium enabling legislation in 1964. Some time later (about 10 years) the market response was the beginning of a trend towards conversion of low and moderate priced rental units. This section explores state policies' role in displacement in Boston. Specifically, we explore the state housing finance program and the effect of condominium enabling legislation. Moreover, we examine the state's potential for fighting displacement; granting certain taxing privileges to the city is a specific action within the state's power that can serve to avert some displacement pressure.

Massachusetts Home Mortgage Finance Agency

Massachusetts Home Mortgage Finance Agency (MHMFA) is an independent state agency which provides assistance to moderate-income persons and families to purchase and rehabilitate their homes. The Agency sells tax exempt mortgage revenue bonds and uses the proceeds to make mortgage funds available to participating banks. The banks provide reduced interest mortgages (currently 10.58 percent) to eligible households; the program also provides for the possibility of a reduced down-payment.

This program is aimed at stabilizing existing housing conditions and providing homeownership to persons who would otherwise have to remain tenants. Many of the program participants are middle-income persons. If a triple-decker is purchased through this program, the new owner may have to increase rents because of the new debt service. (Our assumption is that the triple-decker had no mortgage or one with an interest rate lower than 10.58 percent). Appendix I exhibits how dramatic these rent increases are with increased debt service. If existing tenants cannot afford the rapid rent increase, they will be displaced. Because this program is small, however, its effect on displacement is probably slight. The benefits to middle-income households may not be offset by displacement of low-income tenants.

Condominium Enabling Legislation

In 1964, the state passed condominium enabling legislation. This was the seed for condominium conversions of the 1970's. We noted in the market section that conversions of low and moderate rental stock contribute to displacement. Conversions offer new opportunities for landlords to maximize returns on private rental stock and new opportunities for incoming households to take advantage of tax subsidies for homeownership. The state's role is indirect and passive; market forces are the direct cause of displacement.

State Policies' Potential to Affect Displacement

We have suggested that the state's effect on displacement is only slight. However, the state can affect city taxation policies which may be aimed at averting displacement pressure. Again, the state can only take a passive role. Massachusetts can grant taxation privileges to the City of Boston. For example, if the city chose to tax conversions in Boston, the state must grant this power. The city takes the active role in affecting displacement but the state must consent to the taxation. (The taxation privileges are explored in the Policy Recommendations section).

Conclusion

The state's effect on displacement is minimal. The effects of condominium conversions have contributed to displacement but enabling legislation can only plant the seed for conversions. MHMFA has the potential to displace low-income tenants but the effect of the program is unknown. Further, the state can take a modest role in averting displacement if it allows the city certain taxation privileges. Even then, the city must take the active role and may choose not to use taxation as a policy tool to avert displacement.

CHAPTER SEVEN

EFFECT OF CITY POLICIES ON DISPLACEMENT

This section examines Boston's policies, past and present, that have theoretically affected housing displacement in the city's appreciating neighborhoods. As previous chapters documented, the events that created the current local housing market trends are national in scope. The federal government affects these trends through its housing programs and income tax. In 1980, the federal government spent about $10 billion on its housing programs alone, not including foregone revenue from federal income tax homeownership deductions.[1] Relative to the federal government's programs, the city's effect on the housing market is marginal at best. Last year, in fact, Boston spent none of its own money on housing programs.[2] The city cannot be expected to create or dissolve the national trends driving urban displacement without spending millions of dollars it does not have.

Yet through the tools at its disposal, the city does have the ability to affect the speed with which these trends are allowed to cause a neighborhood to appreciate, depreciate, or remain stable. In this way the city can affect the rates of displacement in different areas. The city's tools, which will be discussed below in relation to their influence on displacement, are 1) direction of federal (or state) funds for economic development, 2) other economic development policies such as property tax agreements and eminent domain power, 3) property tax assessment policies, 4) the disbursement of public services, and 5) the regulation of housing market activities through rent control and condominium conversion restrictions.

Channeling Federal Funds

Through its ability to channel the flow of federal funds into different neighborhoods, Boston can affect the rates of displacement across the city. Its policy is to help finance large projects in order to improve the local economy; the benefits from these developments theoretically filter down to Boston's residents. Thus the city is implicitly willing to trade off gradual neighborhood change for job creation in order to strengthen its economic base. This scenario can cause displacement because the type of jobs created by these projects attract higher income persons who may bid up rent levels in nearby low or moderate income residential neighborhoods. Rent levels could start to rise early in the development and construction stages of these projects because some people may anticipate the neighborhood will appreciate in value when the project is completed and try to make smart investments by buying housing units early in this process, thus bidding prices up, which in time forces rents to rise. When the first new residents move in, they may make the area more attractive to other potential investors. This could create the classic appreciating neighborhood with its accompanying displacement scenarios.

One example of this process is the city's use of Urban Development Action Grants (UDAG's). These funds have often been used to help finance major industrial and commercial developments. A UDAG of $19,600,000, for example, has been awarded for the building of Copley Place, which is very close to the residential South End. Construction on this project has recently begun and by some accounts, some residents who lived close to it have already been displaced.[3] This project, when completed, will create about 6,500 jobs, most of which will be white-collar (professional, technical, managerial, clerical, secretarial, and sales),[4] so that many higher income, professional households can be expected to want to live near the project. Note also that it may provide jobs for low-income residents.

On the other hand, the city may be able to direct large projects into areas where little or no displacement will be caused. Illustrative of this is the Waterfront Area development, which increased economic activity and housing demand in unoccupied or under-utilized buildings and warehouses, thus avoiding direct displacement. If a project is built in a nonresidential area it can create spillover rent pressure in nearby residential neighborhoods. If the physical environment is improved, then higher income people can be attracted to the neighborhood which will cause rent levels to gradually rise. This scenario can create some displacement such as in the North End which is next to the Waterfront Urban

Renewal Project.[5] Thus, by directing developments into nonresidential or sparsely populated neighborhoods the city may decrease the amount of displacement resulting from new developments, but probably cannot avoid displacement completely.

Other Economic Development Policies

Another program which could affect displacement that Boston uses to attract projects into the city is the granting of property tax abatements through the state's 121A property tax abatement program. The idea behind the abatement program is that reducing developer's costs will entice new development into the city. Recent studies have consistently found, however, that tax breaks, reductions, or abatements have little influence on a company's decision whether to build in one city or another.[6] On the other hand, when a developer has already decided to build in the Boston metropolitan area, the city may be able to influence specific site location. Through the negotiations the parties conduct to determine tax abatements and other incentives, the city can adjust the incentives to favor certan sites relative to others. For example, Digital Equipment Corporation may have been induced to locate in Roxbury, over other Boston sites, by a property tax agreement which lowered tax payments.[7] However, it must be remembered that the property tax agreement was part of a total incentive package which included substantial grants and public site improvements.

Similar to the Copley Place example, and due to the city's apparent great interest in developing a local economic base, it is possible that when a development is located within or close to a low income neighborhood, that area will start to appreciate in value, leading to rent increases and displacement of current residents.

As part of the development process, the city has used its power of eminent domain to remove housing stock within an area. This procedure has been used "thousands of times over the past 15 years."[8] This can and has resulted in direct displacement through removal of housing units occupied by low-income households, such as in the West End for the Charles River Park. Moreover, by removing run-down or unattractive housing, projects such as the Charles River Park can stimulate displacement in nearby neighborhoods by engendering demand among relatively affluent persons for the neighborhood's housing units. Again, the importance of the effects of these policies on housing displacement depends upon where they are used relative to nearby housing stock. This analysis is similar to the previous section.

Property Tax Assessment Policy

We conclude that property tax assessment policy neither creates nor averts displacement in appreciating neighborhoods. Although Boston wants to encourage redevelopment in depreciating neighborhoods in order to increase the property tax base, once a neighborhood starts to appreciate, the city has generally been reluctant to let assessments keep pace with increased property values. Studies have shown that the effective tax rate in Boston's appreciating neighborhoods is lower than in other neighborhoods.[9] One view is that this policy creates displacement in appreciating neighborhoods by making housing units a better investment because of lower property tax bills. Young professionals could then be attracted to this area and purchase existing housing by outbidding current residents.

Several recent studies have shown that another scenario is possible.[10] The alternate scenario posits that the city's assessment policy does not provide an incentive or disincentive for housing investment because of property tax capitalization.[11] Property tax capitalization occurs when the value of a property adjusts due to changes in the amount of taxes paid on the property or because the flow of public services to the property changes. If the property value rises by $1.00 because the present value of the stream of tax payments is reduced by $1.00 (with no changes in public services) then it is said that the property taxes are fully capitalized into the value of the property (the degree of tax capitalization, in this case is 100 percent). Providing additional public services, accompanied by no property tax payment increase, could similarly increase the value of the property. Thus by keeping down the property tax payments for properties in appreciating neighborhoods, the value of these properties will rise and buyers must pay more for them. According to this analysis, revitalization, and therefore displacement, are not enhanced by this policy. In the view of the recent studies it is reasonable to believe the second scenario better explains how markets operate.

The Distribution of City Services

The disbursement of public services is believed to influence the amount of displacement. Studies have suggested that cities can aid, reinforce, and stimulate displacement pressures through control and dispersal of Community Development Block Grant (CDBG) funds and political activities such as neighborhood marketing.[12] These two policies increase environmental amenities in some neighborhoods relative to others and so tend to attract higher income persons. Improvements include the installation of gas lamps and brick sidewalks, the planting of trees, general cleanup, and street resurfacing. Again, however, the limitations of data make it difficult to ascertain the cause and effect sequence or magnitude of these factors on displacement. These policies have made several neighborhoods more attractive, such as Beacon Hill, Back Bay, and the Waterfront Area, but we believe that at most, they have only slightly increased displacement.

City Regulatory Policies

Finally, local regulatory policies such as rent control, condominium conversion laws, and housing and building codes can affect displacement pressures in a neighborhood. Historically, suppliers of housing asserted that rent control either decreased the supply of housing or the quality of the housing stock. Within the city of Boston, however, rent control is becoming less important due to the city's program of vacancy decontrol. This program removes the rent control status from the unit after the existing resident vacates. Current condominium conversion laws might postpone some displacement pressure since landlords are required to give existing tenants one year notice. This notification requirement will provide tenants with a little more control than before because they will avoid immediate eviction and gain time to plan their future actions. However, it may persuade some owners (who would otherwise be disinclined) to apply for a conversion permit early to avoid losing a year. Furthermore, the possibility of more stringent condominium conversion regulations in the future may encourage landlords to convert.

The city has major control over local housing and building codes which affect the supply of adequate housing. It is important to note an area of city policy which can affect displacement such as these codes. But whatever displacement they may cause is probably confined to depreciating neighborhoods and outside the scope of this report.[13]

Conclusion

In sum, while analyzing the city's current policies which affect housing displacement, the city has little influence over the housing market relative to federal tax and housing policy and relative to demographics, job location trends in the private sector, and real costs of housing which include energy, interest rates, cost of supplying city services, and construction. The city has some minimal influence on aggregate demand through improving public infrastructure, and encouraging new job creation. It is unlikely, however, that the growth of the professional sector in Boston is the result of city policy; rather, the exogenous developments in the private market account for most, if not all, of the increased job opportunities. On the supply side, the city may have had some influence through tax abatement, streamlining development approvals, and other regulatory policies. However, these policies are not only marginal in their impact but offer no help to encouraging supply without increasing the cost of housing to residents.

Overall, the city's most powerful tool is in its direction of federal and state monies. While this control probably does not affect overall demand, the choice of where to spend the money can have a hypothetical effect on directing where demand will focus and subsequently, where the appreciating neighborhood scenario will develop.

FOOTNOTES

CHAPTER SEVEN

1. The Budget of the United States Government 1980. U.S. Government Printing Office, Washington, D.C., 1980.

2. Telephone Conversation between Marc Draisen, Office of Housing Development and Construction, and Bill Churchill.

3. Telephone conversation between Joan Smith, BRA and Leonard Lucas.

4. Copley Place: Housing Impact Study for the BRA, by Economics Research Associates. Boston, Ma. December, 1979.

5. Telephone conversation between William Johnson, BRA, and Peter Miller.

6. Roger Schmenner, "Industrial Location and Urban Public Management." Paper done for the Joint Center for Urban Studies Conference on Urban Growth and Development. Summer 1977. Bennett Harrison and Sandra Kanter. "The Political Economy of State Job Creation--Business Incentives," in Journal of the American Institute of Planners. October 1978. pp. 424-435.

7. Information provided by Paul Horn, Economic Development and Industrial Corporation, Boston, Mass. 1981.

8. Telephone conversation between Paul McCann, Executive Counsel to the Director, BRA, and Peter Miller, 3/3/81.

9. Telephone conversation between John Avault, BRA, and Leonard Lucas.

10. "Intrajurisdictional Property-tax Capitalization," Howard S. Bloom, Helen F. Ladd, and John Yinger, for the Department of Housing and Urban Development. Printed by John F. Kennedy School of Government. Cambridge, Ma. August, 1980.

11. An unequal property tax assessment policy could possibly destabilize or further deteriorate depreciating neighborhoods and cause displacement. The process by which this can possibly occur and the impacts on displacement of correcting for this policy through a tax equalization program follow: Since property assessments do not keep pace with appreciating property values in certain areas, tax revenues do not increase

as fast as they could. If assessments rose as fast as property market values then the same tax rate could be applied to an increasing tax base; thus increasing property tax revenues. But when assessments do not increase as fast as property values then the tax rate has to be increased to generate the additional needed funds. This illustrates that low income neighborhoods have to pay added tax revenues to make up for the under assessed property in other neighborhoods. This effect is further enhanced since property in low income neighborhoods is not assessed often enough to take account of its depreciating value. Thus those living in depreciating neighborhoods subsidize those in appreciating neighborhoods.

This policy can create cash flow problems for landlords in low income areas. In these neighborhoods, landlords, are dependent on the cash flow created by rent to pay all building costs. Additional tax revenue payments reduce the amount of cash used for repairs and maintenance (usually the first expenses cut by landlords). This policy could be partially responsible for neighborhood deterioration and thus make the area an unpleasant place to live. People may respond by moving out. These events could lead to displacement (as it has been explained previously).

The city's new policy of property tax equalization (through more frequent assessments) has substantial implications for current property owners. Since property taxes are capitalized into housing value, any change in the effective tax rate will result in substantial capital gains or losses for homeowners and landlords and, hopefully, lower rents for tenants.

In appreciating neighborhoods present and potential property owners will be affected differently by this policy. One scenario calls for present property owners in appreciating neighborhoods to incur large effective tax rate increases due to 100% property reassessment. Consequently some may be forced to move out of their neighborhood and displacement should occur. Investing incentives for those not presently owning property in appreciating neighborhoods should not be affected by the reassessment because of capitalization (the price for property in these neighborhoods should decrease, reflecting the increased property tax bill. Overall prices for property, including tax payments, could be equal to those before reassessment). On the other hand, residents in depreciating neighborhoods should benefit because their effective tax rate, presumably, will be lowered. Thus in depreciating neighborhoods displacement pressure may decrease because it will cost less to maintain a housing unit in these areas. Homeowners and landlords will not be forced to cut back on maintenance expenses and the depreciating neighborhood displacement scenario will not be reenacted. Two points made concerning the role of property tax policy on displacement scenarios are first, fiddling around with property assessments can not encourage or discourage revitalization because of property tax capitalization and second, even if the city could assess neighborhoods differently, it would be bad policy because it would raise taxes in lower income areas.

12. Philip L. Clay, "Gentrification; Making the City Good for the Middle Class," in Neighborhood Renewal by Philip L. Clay, 1979.

13. A study by the federal Office of Management and Budget shows that many codes force owners to overbuild homes and apartments. The study suggests that many parts of these codes could be revised and cut back to allow less expensive yet still safe housing units to be provided. The existing codes discourage the building of innovative housing using new technologies because of their inflexible nature. Theoretically these codes could influence displacement in two ways. The first is because they prevent innovative, low cost, safe homes from being built, and second, since landlords in poor areas have less cash flow (sometimes due to over taxing), repairs are performed less frequently. Thus stringent code enforcement could force the number of available housing units for low income people to decrease (or if there were little or no code enforcement then these people may have to live in unsafe housing). While new flexible building codes could help increase the supply of housing in the long run, they alone are not enough to make new construction profitable now. It is also not clear whether present codes are enforced in depreciating neighborhoods with low income housing. Thus changing this policy would have a slight impact, if any at all, on displacement.

PART III

SUMMARY AND POLICY SUGGESTIONS

GUIDE TO MATRIX

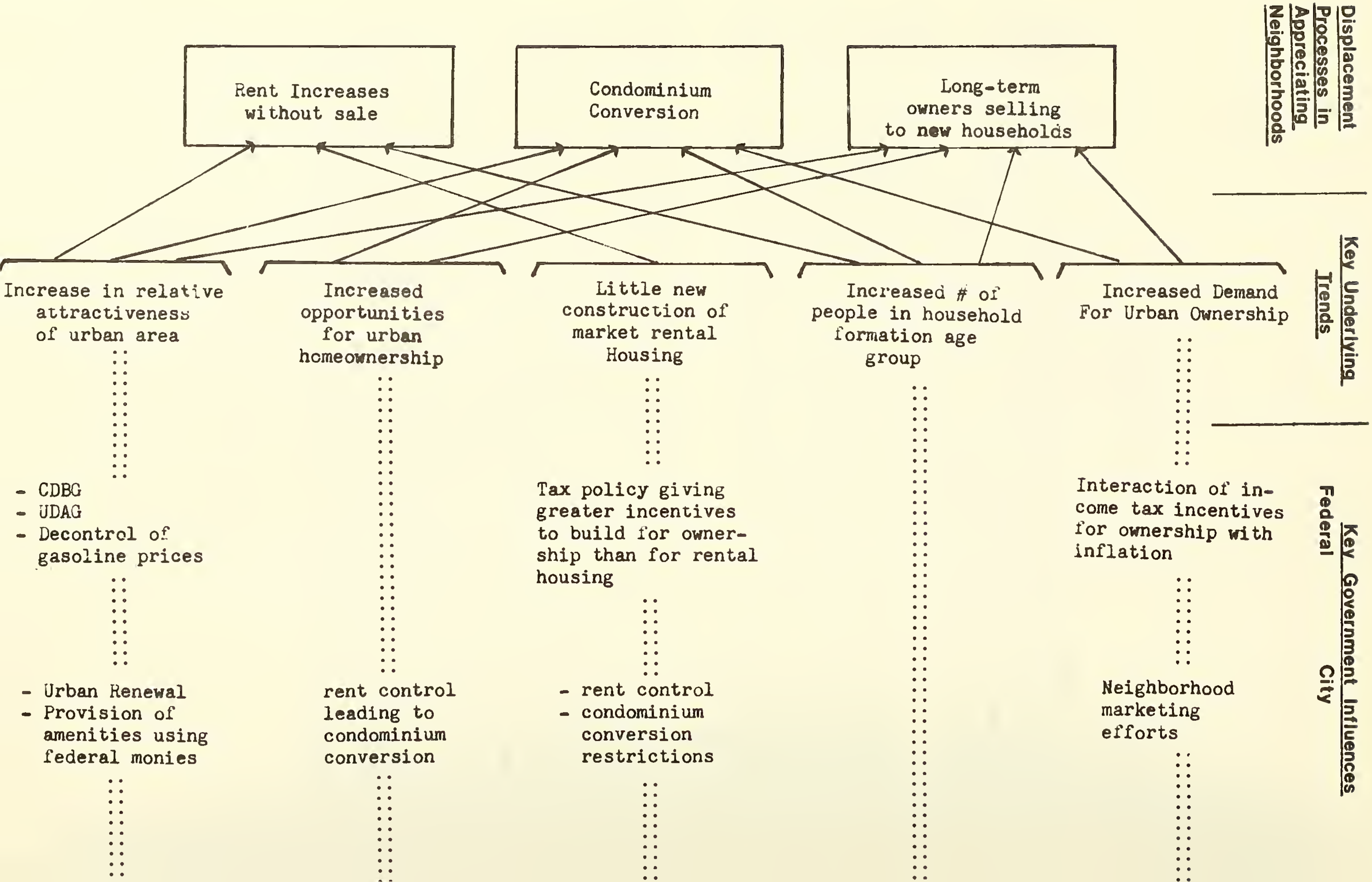
Before outlining our policy recommendations to the city concerning housing displacement, it would be useful, at this point, to summarize what the report discussed so far. A matrix is used for this purpose and a short explanation of what it accomplishes follows.

The matrix serves three purposes. First, it graphically summarizes the relationships between the three real estate activities which generate displacement, the underlying forces which directly affect them and finally, the government policies and non-governmental factors which influence the underlying forces. Set up in this way, the matrix illustrates through what means policies could affect displacement in appreciating neighborhoods.

Second, the matrix attempts to rank the importance of government policies and non-government factors on the underlying forces which tend to cause displacement. These rankings would enable government officials to better assess the benefits of attempting to influence a particular cause of displacement through a specific policy. The relative importance of a particular cause of displacement will affect the level of effort expended to influence that cause.

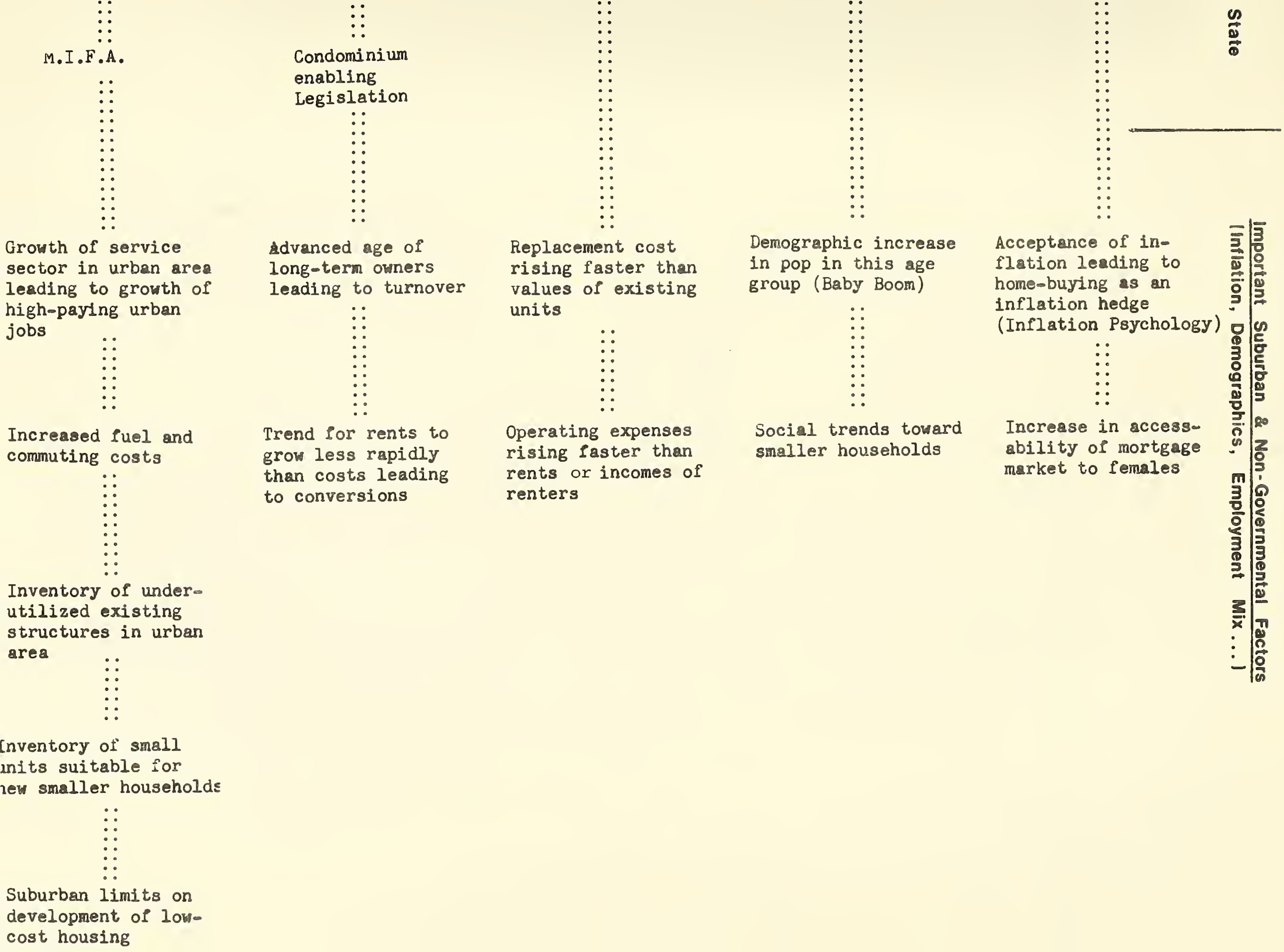
Third, the matrix also shows which level of government can affect the different underlying forces the most. Policy makers of a certain level of government can determine whether to attempt to influence a particular underlying cause of displacement and if so, by what means.

Displacement Matrix


Displacement Processes in Appreciating Neighborhoods
Rent Increases without sale
Condominium Conversion
Long-term owners selling to new households
Key Underlying Trends
Increase in relative attractiveness of urban area
Increased opportunities for urban homeownership
Little new construction of market rental Housing
Increased # of people in household formation age group
Increased Demand For Urban Ownership
Key Government Influences
Federal
- CDBG
- UDAG
- Decontrol of gasoline prices
Tax policy giving greater incentives to build for ownership than for rental housing
Interaction of income tax incentives for ownership with inflation
City
- Urban Renewal
- Provision of amenities using federal monies
rent control leading to condominium conversion
- rent control
- condominium conversion restrictions
Neighborhood marketing efforts

State

Important Suburban & Non-Governmental Factors
(Inflation, Demographics, Employment Mix . . .)



M.I.F.A.

Growth of service sector in urban area leading to growth of high-paying urban jobs

Increased fuel and commuting costs

Inventory of under-utilized existing structures in urban area

nventory of small nits suitable for ew smaller households

Suburban limits on development of low-cost housing

Condominium enabling Legislation

Advanced age of long-term owners leading to turnover

Trend for rents to grow less rapidly than costs leading to conversions

Replacement cost rising faster than values of existing units

Operating expenses rising faster than rents or incomes of renters

Demographic increase in pop in this age group (Baby Boom)

Social trends toward smaller households

Acceptance of inflation leading to home-buying as an inflation hedge (Inflation Psychology)

Increase in accessability of mortgage market to females

CHAPTER EIGHT

CITY POLICY SUGGESTIONS

Our analysis indicates that the factors that drive displacement, including demographic changes, cost increases, and federal income tax subsidies for ownership, are likely to continue. In appreciating neighborhoods in particular, these factors are likely to displace existing residents from their rental units, and these households will suffer costs and hardship, psychological as well as economic. There is a great deal of disagreement about (1) how much the city should intervene in the housing market on behalf of these households (perhaps to the detriment of other policy goals) and (2) how much influence the city really has over the urban housing market forces. The following section outlines strategies the city can follow, if it chooses to intervene to ease displacement pressures, avert displacement of some types of households, or to assist tenants to remain in their housing units. These policy suggestions are presented in the context of the tools we have identified as offering the city the most leverage, and the market activities we have identified as the key causes of displacement in appreciating neighborhoods.

The four major tools of city housing policy are: 1) control or direction of federal programs and projects; 2) regulatory influence on market transactions; 3) taxing ability (subject to state-enabling legislation); and 4) provision of services and infrastructure. Our analysis suggests the first two offer the most potential for significant intervention. Changing tax policies offer some potential but requires state approval, and the provision of services appears to have minimal potential for influencing housing market forces.

We have discussed why market rents increase faster than residents' incomes in some neighborhoods. In these areas displacement can result in three general ways:

1. When a rental unit's rent rises due to increases in demand, a new, higher income renter household can bid away the unit from a lower income renter, thereby displacing the latter.

2. When 2-4 family structures with rental units are sold, there may by large increases in rent which exceed the existing residents' ability to pay, and they are displaced.
3. When a rental unit is converted into a condominium at a price beyond the reach of the existing tenant, the tenant is displaced.

Each of these scenarios has a set of forces and factors behind it, and our policy recommendations attempt to apply the tools the city has to influence the specific market situations which cause displacement.

Type I Displacement (Rental Units Stay Rental, in Investor-Owned Buildings

The growth in the number of households who are of the age group that seeks urban rental housing, combined with the generally higher income and smaller space requirements of this group results in rents being bid up, and gives the profit-maximizing housing supplier an incentive to replace the existing resident with a new one who will pay more. When and if the market rent rises beyond the existing tenant's ability to pay, the tenant is displaced. The market result, or symptom, would be rents increasing continually with the market rate, and faster than either costs or existing resident's incomes.

Intervention Strategy. If the existing rent level covers the real cost of supplying the housing services, then the best solution for averting displacement pressure is to try to direct the new demanders away from this type of area, which has potential for self-stabilization. If the incomes of the existing residents are high enough, this stabilization can be encouraged by programs which encourage the renters to become owners through cooperatives or condominiums.

The city, however, is limited in its ability to "direct" where higher income households decide to live, and may also find that all the areas these households may accept will have displacement problems from the increased demand.

If an area has market rents that have fallen below the level needed to support good operation and maintenance, and the residents cannot afford rent increases, then there are severe limits as to effective anti-displacement strategies. Absent new investment associated with revitalization, the long-run prognosis is abandonment and displacement from demolition or condemnation. New investment, of course, means higher rents and costs, and can result in displacement from "gentrification." In such situations, the only solution to displacement is increased financial assistance to the low-income residents. (It is also possible that rent subsidies in appreciating neighborhoods may not be the least-cost means to providing housing for low-income households).

Specific Policy Recommendations

Type I (Rental Stay Rental)

Control of Federal Projects. Large-scale downtown developments (leveraged with UDAG funds) that potentially attract higher income professional households should be directed away from stable neighborhoods and into areas with vacant or nonresidential structures, severely deteriorated housing stock, or neighborhoods with a high proportion of owner-occupied units. We recognize that some displacement may occur in housing in or around these deteriorated areas, but because the new demand must be met, we feel it is best that increases in housing prices reflect use, and upgrading by new owners rather than through speculative increases that result in rapid increases in rents with little or no improvements to basically sound units.

Requiring displacement impact analysis as part of any large-scale federally assisted development could help city policy makers consider housing market implications of various development proposals as part of their decision-making criteria.

The city's ability to direct large developments is limited by two factors: 1) the shift in Boston's employment base towards financial, office, and real estate employment will always center in the central business district and will attract households with generally higher incomes than existing residents; and 2) it is likely that new households' demand for housing will spill over into surrounding areas where the rent levels are below those required for expansion of housing units from the vacant or nonresidential stock. Thus, while control of federally-assisted developments offers the city influence over a great deal of money, the potential for averting displacement from any development that provides high paying jobs is limited. Directing them to vacant or nonresidential areas could result in gradual rather than abrupt displacement, however, which in our estimate is a worthwhile objective.

Regulatory Tools. Rent control is often suggested as a solution to displacement that is due to rent increases. In fact, rent control could completely avert displacement caused by rents rising faster than ability to pay of existing tenants. Such a policy, however, has its costs and has undesirable side effects as well. In the first place, if rents are not allowed to rise as fast as the cost of supplying housing, owners of rental property will be induced to disinvest by deferring maintenance and/or will be forced to subsidize renters out of their own pockets. Furthermore, a comprehensive rent control program presents substantial administrative costs and problems, such as monitoring rents and costs, arbitrating disputes, and forcing owners to maintain or improve their property despite the limits on rent levels.

Our analysis in the market chapter suggests that the least prevalent type of displacement is from rent increases that do not involve a transfer of property, and therefore the protection of rent control provided may be of less value than the costs of deferred maintenance, administration, and little new flow of private capital to the rental housing stock.

On the other hand, a rent control program that allowed rent increases to cover all increases in operating expenses, or one that targeted controlled rents to just the households with economic need could provide most of the benefits of rent control, at less cost in terms of disinvestment.

Boston's current policy of vacancy decontrol has the effect of protecting long-term tenants from major increases in rents, but again, does not distinguish among renters on the basis of need. Clearly, an equitable rent control policy must strike a balance between the needs of property owners to earn a return on their investment and the needs of low-income households for protection against exhorbitant rent increases. In any event, rent control does not solve the underlying problems of increasing costs, limited incomes, and growth in demand for condominium ownership.

General Federal Housing Funds. The flow of federal money into city-controlled housing programs is a resource the city can use to avert displacement. It is clear, however, that there are other goals in housing policy as well. For instance, developing affordable housing opportunities is important, especially to households that are displaced. The best anti-displacement strategy using federal housing dollars is to (1) protect current renters in subsidized units from rent increases they cannot afford, and (2) to assist tenant-sponsored cooperative or condominium conversion. Rent subsidies or equity positions are the best ways poorer Boston residents can avoid displacement from "gentrification."

Rent subsidies can help more people if they were more shallow - that is, the level of subsidy could be reduced so tenants would pay 30 percent of household income toward rent, rather than the current 25 percent. While this might seem harsh on the currently subsidized renters, it would allow some of the subsidy to go to the 9 percent of Boston's renters who pay one-half or more of their income towards rent.

Assisting tenant-sponsored cooperative or condominium conversion could take the form of technical assistance, financial assistance, (especially if rehabilitation is involved), and regulatory incentives such as rights of first refusal and 60 percent tenant approval for any conversion. It may be cheaper to develop new housing in non-appreciating areas than to subsidize renters or low-income owners in appreciating neighborhoods, and the city will have to balance the hardship of displacement against the number of households it could house in cheaper areas with the same money.

Type II Displacement (Rental Units Stay Rental, in Owner-Occupied Buildings

Older, long-term owners of owner-occupied 2-4 family rental buildings have historically not increased rents as fast as the market will bear, due to low or nonexistent debt service and/or a close relationship and sensitivity to their long-term tenants.* But new owners are more

*J.P. study

likely to have heavy debt service obligations, and perhaps less affinity for the existing tenants. Regardless of the new owners' intentions, the purchase price they paid is more likely to reflect the potential market rent rather than the historic, artificially low, rent of existing renters. Consequently, the new owners are forced to raise the rents to the market level in order to cover their costs and debt service. The market description of this situation is abrupt, steep rent increases in owner-occupied 2-4 family structures, sometimes accompanied by some improvements or modernization.

Intervention Strategy. The city's 2-4 family structures with low or nonexistent debt service are a valuable source of affordable housing, but to the extent that these buildings are owned by elderly households, city policy can have only a limited impact on turnover. Although we have suggested policies that encourage, reward, and help long-term owners, they may have little effect on those owners who are at a lifecycle age where they want to retire and move, or simply to give up the responsibility of being a landlord. Therefore, the most appropriate policy focus for the displacement problems in these situations may be on helping the tenants stay, through subsidies, or move, through relocation assistance, or help tenants purchase these buildings.

Policy Recommendations

Type II (Long-term Owners' Selling)

The situation of long-term owners of 2-4 family structures who have not increased rents as fast as the market will bear may cause significant displacement in the future because many owners in Boston are approaching retirement age. Unfortunately, there seems to be little the city can do to affect a seventy or eighty-year-old owner of a triple-decker who wants to get out of the landlord business. Proposition 2-1/2 may force the city to raise property tax revenue slower than housing values increase because growth of revenue from property taxes is limited to 2-1/2 percent increase per year after 1981. If this happens, the city might be able to petition for the power to offer tax breaks or rebates to new owners of rental properties contingent on keeping the tenants who are living there at time of purchase.

Transfers of property incorporate the increased cost of borrowing into the cost of providing housing from existing structures. In an individual case, financing costs do not force up rents - the purchase price is set by market rents and costs, so for a given market rent the higher interest rate will result in a lower purchase price - but in the long run, the cost of borrowing represents a real increase in the cost of housing. It is in the city's interest, then, to discourage transfers and postpone the rent increases that follow the sale of a unit whose rents are below the market level. The city could accomplish this by applying to the state for the power to tax "excess profits" on residential property. Capital gains resulting from substantial improvements, especially energy-related improvements, should be excluded.

The obvious advantage of this policy tool, as well as the tax we suggest in the condominium section below , is that they not only act to discourage undesirable events, but to raise revenues that can be used to compensate or protect residents who suffer from adverse market conditions. Uses of this revenue are suggested following the section on condominiums.

Type III Displacement (Rental Unit Becomes Owner-Occupied)

Type III Displacement is perhaps the most visible form: condominium conversion. The forces behind this activity include the surge in the number of households seeking urban housing, the interaction between their income, inflation, and federal ownership tax subsidies, the invention and market acceptance of condominium ownership, and the relative price advantage of existing urban structures over new suburban housing.

These forces cause the demand for ownership to increase beyond the demand for rental units in some areas, making the value of a unit to an owner-occupant exceed its value as a rental unit. This results in displacement when, in the case of condominium conversion, the purchase price, carrying costs, and down-payment requirement put the ownership option beyond the means of the existing household. Although the trend toward ownership affects all parts of the city, (we have estimated owner-occupied units have increased by nearly 4,000 from 1970 to 1980, exclusive of condominium conversion),* it is less likely that displacement resulted from this trend when it occurred in stable neighborhoods.

Intervention Strategy. Conversion of rental units to owner-occupancy can be seen as a desirable trend, in that the new owner-occupants are protected from most of the displacement pressure associated with appreciating neighborhoods. In practice, however, the price of the ownership option is often too high for many low or moderate-income renters. So, while condominium conversion does provide relatively low-cost home-ownership opportunities for first-time or moderate-income households, it can have the effect of decreasing the supply of low-income rental stock. In theory, each condominium purchaser releases one rental unit, (his old one), and eliminates one, (his condominium), and the net effect of conversion on the rental housing market is zero. But if the released unit is fancier than the eliminated one, or if two rental units are combined to produce the condominium, there may be a reduction in housing opportunities for low-income renters. As far as displacement is concerned, condominiums can be seen as simply a way in which the cost of the housing services is changed; made lower for high-income households, and higher for low-income households.

The city could address the problems of displacement pressure and hardship by encouraging least-cost conversion of rental structures in stable neighborhoods for area residents, procedural safeguards for renters in appreciating areas, non-profit (subsidized) development of ownership opportunities in low-income areas, and high-income housing development in abandoned or nonresidential structures in appreciating neighborhoods.

*See Appendix

Specific Policy Recommendations

Type III (Condominiums)

Regulatory Powers. The city could respond to market pressure for ownership in multi-family structures by:

1. Forbidding eviction of elderly, long-term, low-income renters because of condominium conversion. This group is likely to suffer the greatest harm from displacement, and is most in need of public-sector protection efforts. Unfortunately, a ban of this sort might result in discrimination against or harrassment of the group intended for protection. Owners of rental housing may not rent to someone they cannot evict, or, if left owning a unit they cannot convert, may fail to be ideal landlords.
2. By requiring two years notice of conversion of units occupied by long-term (three years or more) tenants. This notification requirement would not, of course, prevent earlier conversion of units the current residents wish to buy, or of units voluntarily vacated by tenants.
3. By taxing conversion of rental housing units into condominiums, using a sliding scale that ranged from no tax on sales to current tenants, to high taxes on conversions that displace low or moderate-income, long-term residents. This policy would require approval by the state. A condominium conversion study done for Cambridge suggests that such a tax will have little effect on the likelihood of conversion in many cases, but it would prevent some conversions and would provide revenue that could be used to finance relocation and non-profit housing developments.

Use of Revenue from Conversion and Speculation Tax. The city should help renters stay in their apartments whenever possible. Financial assistance as well as streamlined conversion approval can be given to owners of rental properties who give long-term leases at affordable rents to low-income, long-term renters. The ideal goal is to give equity positions to as many renters as possible, because it is the most effective long-term protection against displacement from market forces. Financial aid and technical assistance could be provided to developers, non-profit or otherwise, who provide low-income renters with this opportunity.

Summary

At the root of the displacement problem is the income differential between new households and existing residents, and the limited incomes of some Boston residents facing real increases in housing costs. The city has some tools it can use to postpone the effect of market trends and federal income tax policy, but given the city's scarce resources, long-run city-financed solutions are hard to imagine.

Short-run protection of existing renters through banning conversions and strict rent and eviction control is within city control. Such policies, however, can have long and short-run side effects which can decrease the quantity or quality of housing in Boston. Condominium conversion restrictions, for instance, discourage capital improvements in some cases, and reduce homeownership opportunities for moderate-income households who cannot afford the rapidly increasing price of single-family houses or new construction in general. Rent control that prevents owners from passing on real increases in costs and/or restrict returns on investments in rental housing below those available from other investments will reduce or defer maintenance and promote disinvestment, abandonment, and ultimately displacement through demolition.

Our policy suggestions are designed to promote equity positions for renters whenever possible, and to give the limited assistance available to those households that are most likely to be harmed by private market housing activities. Directing federally-assisted developments into nonresidential or abandoned areas can mitigate the rapid displacement from new higher-income workers. Taxing displacing market activities may also reduce displacement and is likely to provide revenues that can be used for housing programs or relocation assistance. Regulatory control can stop evictions and control rents, but do not represent a long-run solution.

APPENDICES

INTRODUCTION

The primary purpose of the Appendices is to show the sources of our data and the methodology we used to make our projections. Amidst the controversy over the Census count of Boston's population it was very difficult to estimate Boston's housing stock and population. We carefully checked BRA population projections, housing counts and monitoring of the change in the housing inventory (especially the work of Rolf Goetze and Bonnie Heudorfer) against the gradual release of Census information and information gleaned from 1980 Household Survey of The Characteristics of Boston's Population and Housing: 1980 conducted by the Center for Survey Research for the Boston Redevelopment Authority. In the appendices we present the methodology and our estimation of

1) The population in 1980.
2) The number of households in 1980.
3) The age distribution of households in 1980.
4) The change in the age distribution of households from 1970 to 1980.
5) The number of housing units in Boston in 1980.
6) Boston's housing stock: vacancies and unsound structures, 1970 and 1980.
7) The increased demand for ownership in 1980 (Expected ownership versus actual ownership).
8) The change in the housing stock from 1970 to 1980.
    a) Components of change.
    b) Response to increased demand for ownership.
9) The dramatic decline in the private market provision of housing in the face of the large immigration of 25-34 year old households.

We hypothesize that displacement occurs when a tenant cannot afford the increase in monthly payment that results when a rental unit is turned into a condominium, a 2-4 unit structure transfers from either an absentee-owner to an owner-occupant or from a long term owner to a young professional buyer, and the new owner must raise rents to cover the debt service payments, or when a landlord raises rents to the market level. Our attempt to recommend effective government policy rests on our ability to estimate the frequency of the potentially displacing market activity and the potential that displacement will occur. Therefore, our final group of appendices will present

1) The net loss of long term owners who owned 2-4 unit structures from 1970 to 1980.
2) The net increase in owner-occupied 2-4 unit structures from 1970 to 1980.
3) The increase in high rent apartments in Boston from 1970 to 1980.
4) The typical price increase faced by tenant when his/her unit is converted to a condominium.
5) The typical price increase faced by tenant when his 2-4 unit structure turns over from long term owner to new owner or from an absentee owner to an owner occupant.

APPENDIX A

Population Estimation

Boston's population decreased from 642,000 in 1970 to 562,000 in 1980, a 9.3 percent decrease.[1] Housing demand increased by 3,908 households during the seventies while the housing stock increased by 9,700 housing units.[2] From a preliminary overview, displacement does not seem to be much of a potential problem.

In order to make an accurate population estimation, we struggled to balance the discrepancy between the Census originally released working number count of 504,000[3] and the BRA Research Department's population projection of 641,000.[4] We recognized the potential bias of the BRA projections because of their self-interest in making the population count as large as possible, while we feared that the Census count was too incomplete to accept at face value.

We were able to close the gap between the two projections because the BRA had overestimated the average household size and the housing stock inventory. After adjusting for these differences, we came up with a population estimation of 601,500.[5] This population estimate still differed sharply from the US Census working numbers because the Census calculated that the average household size was 2.4 and the vacancy rate was 19.47 percent.[6] The explanation for the high vacancy rate is that the Census admitted on the same page of their preliminary release of the population count that they had identified but not enumerated 23,700 dwelling units, and therefore had underestimated the population count. When using city-wide vacancy rates and the average household size, we were able to increase the population count to 560,000.[7] In fact, the most recent population count released by the Census was 562,582.[8]

We therefore settled on the most recently released Census population count because there is no incentive for the Census to misrepresent the figures and the Census count is only 3.3 percent less than our population estimate based on the use of the BRA's careful monitoring of the housing stock and information from the BRA household survey.

APPENDIX B

The Number of Households

Our household forecast is dependent on using population in households and the average household size. The number of households is calculated by dividing the population in households by the average household size. The household forecast is crucial in estimating housing demand and the vacancy rate.

The population count released by the Census is 562,582, of which 30,669 were classified as "population in group quarters".[9] Therefore, the population in households is 531,913. Dividing the household population by the Census calculation of the average household size of 2.4,[10] we estimated that the number of households in 1980 is 221,630, indicating an increase of 3,908 households from 1970 to 1980.[11] The vacancy rate (1 - total # of households/total # of housing units) in 1980 was 8.38 percent, but 2.8 percent of the stock is not considered structurally sound and another 1.9 percent is public housing units that are considered "vacant, not habitable".[12] This would mean that the vacancy rate of habitable available units is less than 3.7 percent.

APPENDIX C

The Age Distribution of Households in 1980

The household forecast is dependent on the population forecast and the age distribution of the population. The number of projected households in each age group is determined by multiplying the "headship" rate for the age group of the population in 1980 times the size of the population in that age group. The "headship" rate is the percentage of members in an age group who are head of a household.

Our methodology to project the number of households and the age distribution of households would be to 1) determine the population, 2) project the age distribution of the population, 3) calculate a headship rate for each age group, 4) multiply the headship rate for each age group times the population in the age group to get the number of households in each age group, and 5) sum up across all age groups to get the total number of households.

Since we already have an estimate of the population and the number of households, our main task was to estimate the age distribution of the population and to adjust 1970 age group headship rates to reflect the tendency of households to live in smaller households. These two adjustments are very helpful in determining how much of the increase in the number of households is due to the baby boom generation maturing and how much is due to changes in household formation behavior.

Our population estimate is 562,582, (the Census count). To project the age distribution of the population we had the option of using 1) the age distribution of the population estimated by the BRA and used for their population projection (of 640,000)[13] or 2) the age distribution of Boston's household population estimated from a Household Survey conducted by the Center for Survey Research (hereafter referred to as the CSR Household

Survey).[14] The BRA estimate of the age distribution of the population was a direct ratio of the estimated age distribution of Boston's Standard Metropolitan Statistical Area population and the historical trend of the tendency of the population in a certain age group to live in Boston. The CSR Household Survey presented a more up to date age distribution of household population based on the current locational behavior of households in different age groups. Though the age distribution of households is different than the age distribution of population (it underestimates 15-24 year olds who are living in dormitories and the elderly living in nursing homes), we used the household age distribution because it was the most current data and enabled us to see the impact of different age groups on housing demand.

Below is the CSR Household Survey age distribution, the BRA estimated age distribution, and the adjusted age distribution. The adjustments are an attempt at eliminating as much of the bias that arises out of using the age distribution of the household population without losing the relevant up to date information provided by the CSR Household Survey.

TABLE APPENDIX C-1: Age Distribution

	CSR Survey[14]	BRA projections[13]	Adjustments	Pop. Dist.
0-4	6	7.3	6.4	36,005
5-9	7	5.9	6.5	36,508
10-14	9	7	8.5	47,419
15-19	10	9.4	9.5	53,445
20-24	10	12.5	10.8	60,759
25-29	12	9.4	11.6	65,260
30-34	9	8.1	8.6	48,382
35-39	10	5.3	5.6	31,505
40-44	10	3.7	3.9	21,941
45-49	8	4.5	4.1	23,066
50-54	8	4.7	4.3	24,191
55-59	9	4.5	4.5	25,316
60-64	9	4.4	4.4	24,703
65+	11	13.3	11.38	64,022
TOTAL	101	100.00	100.00	562,582

The rule of thumb behind the adjustments was that the CSR Household Survey results were adjusted towards the BRA population projection as long as the adjustment remained within the rounding range around the CSR Household Survey estimate. The difference between the age distribution of the population projected using the adjusted CSR Household Survey estimates and the BRA projections are not that large when one combines age groups.

The noticeable difference between the 1970 age distribution and the estimated 1980 age distribution is the substantial increase in the population age 25-34 and the net outmigration of those people older than forty five years old.

TABLE APPENDIX C-2: Change in Age Distribution 1970-1980[15]

	1970 Age Dist.	1980 (CSR Survey)
0-14	153,000	119,992
15-24	138,182	114,204
25-34	79,379	113,642
35-44	60,735	53,446
45-64	128,324	97,276
65+	81,759	64,022
TOTAL	641,379	562,582

One of the major reasons we chose the population age distribution as indicated by the CSR Household Survey's age distribution of household population is that is based on the actual presence of these age groups in the City, while the BRA population projection age distribution is based on estimating Boston's age distribution as a mirror of the age distribution of the SMSA population. Therefore the estimate using the CSR Household Survey is sensitive to the different locational preferences of people in different age groups and does not assume there was an evenly distributed outmigration of households from all age groups as the BRA estimate did. Below is the change in the proportion of the SMSA's population in an age group that lived in Boston from 1970 to 1980 for the two estimates of the age distribution.

TABLE APPENDIX C-3:
Proportion of SMSA population in Boston by Age Group

	BRA[16] 1970	BRA[16] 1980	CSR[17] 1970	CSR[17] 1980
0-14	.209	.174	.209	.195
15-24	.28	.221	.28	.205
25-34	.239	.203	.239	.236
35-44	.199	.163	.199	.172
45-64	.219	.182	.219	.171
65+	.265	.226	.265	.190

To project the housing demand from the age distribution we must determine how many persons in each age group are head of a household. Using the 1970 headship rates to predict the housing demand in each age group would not take into account the fact that people tend to live in smaller households. Because of the increase in divorces, the delaying of marriage and child rearing, empty nesters seeking smaller accomodations, an increase in the number of young households (especially women) who preferred and could afford to live alone, and couples having fewer children, the average household size dropped from 2.8 in 1970 to 2.4 in 1980.[18]

The corrolary of a decrease in the average size of a household is that the headship rate for the population increased from .339 in 1970 to .394 in 1980.[19] The increase in the headship rate (the percentage of the population that is a head of a household) can be explained by 1) an increase in the percentage of the population which was over 20, and 2) the increased tendency for people to live alone.

The shift in the age distribution of the population explained 24 percent of the increase in the headship rate. The remainder of the increase was due to the increase propensity of people in an age group to live in separate housing either due to delaying marriage, divorce, the freedom of women to live on their own, etc.

TABLE APPENDIX C-4: Projected Age Distribution of Households Based on Age Distribution of Population (Est.) and 1970 Age Specific Headship Rates

	1970 Headship Rate[20]	1980 Pop.	HH's in 1980 Based on 1970 Headship Rates
15-24	.18	114,204	20,557
25-34	.494	113,642	56,139
35-44	.526	53,446	28,113
45-64	.566	97,276	55,058
65+	.598	64,022	38,285
		562,582	198,152

A) Projected number of households in 1980 assuming age distribution of population and headship rates same as in 1970.
.3391 x 562,582 = 190,772.

B) Number of households in 1980 assuming headship rates same as in 1970 = 198,152 (above).

C) Number of households in 1980 = 221,630. (See Appendix B).

D) A change in the age distribution of the population explains 24 percent of the increase in households from 1970 to 1980. (7,380/30,858)

As a result, we had to adjust the headship rates evidenced by age groups in 1970 by 11.87 percent in order to account for the new trend of people living independently.[21] We had to choose between evenly distributing the increase in headship rates across all age groups or whether to distribute the increase according to our sense of which age groups exhibited the largest change in behavior towards living separately. It was our opinion that the major change in life-style occurred to those people age 25-45 who are adjusting simultaneously to an increase in the divorce rate and the tendency for people to delay marriage and child rearing and the increased acceptance of women living on their own. The population age 15-24 is also affected by the trend to delay marriage and child rearing but this is assumed partially offset by some of the age group living at home for a longer period of time or forming a household of unrelated individuals because of the high cost of housing. We therefore decided to weigh the increase in headship rate to compensate for our estimation that the headship rate increased more for those age 25-44 than those in the other age groups.

Therefore, our initial adjustment of increasing the headship rates evenly by 11.87 percent resulted in the following age distribution of households.

TABLE APPENDIX C-5:
Projected Age Distribution of Households
Based on Age Distribution of Population (Est.)
and Adjusted Age Specific Headship Rates

	1970 Headship Rate	Adjusted H.R.	1980 Population	1980 Households
15-24	.18	.201	114,204	22,955
25-34	.494	.5526	113,642	62,842
35-44	.526	.588	53,446	31,426
45-64	.566	.633	97,276	61,576
65+	.598	.669	64,022	42,831
TOTAL	.3391	.394	562,582	221,630

Our weighted adjustment of the age specific headship rates gives us the following results.

TABLE APPENDIX C-6:
Projected Age Distribution of Households
Based on Age Distribution of Population (Est.)
and Weighted Adjustment of Age Specific Headship Rates

	1970 H.R.	Adjustment	Adjusted H.R.	1980 Population	1980 Households
15-24	.18	+ 7.5%	.1935	114,204	22,098
25-34	.494	+20 %	.5928	113,642	67,367
35-44	.526	+12.5%	.5918	53,446	31,627
45-64	.566	+10 %	.6226	97,276	60,564
65+	.598	+ 4.4%	.6244	64,022	39,974
TOTAL	.3391	11.87%	.394	562,582	221,630

We decided to average the difference between the even distribution of the increase in headship rate and our weighted adjustment of the headship rate and present our projection of the age distribution of households in 1980 and the change in age distribution from 1970 to 1980. The actual numbers may not be perfectly accurate, but the significant changes in the age distribution of households is the most important point to be made and cannot be disputed.

TABLE APPENDIX C-7:
Projected Age Distribution of Households
and Change in Age Distribution Between 1970 and 1980

	Households 1970	Households 1980	Change 1970-1980
15-24	24,947	22,527	- 2,420
25-34	39,219	65,105	+ 25,886
35-44	31,978	31,526	- 452
45-64	72,579	61,070	- 11,509
65+	48,999	41,402	- 7,597
			+ 3,908

APPENDIX D

Estimation of # of Housing Units

To estimate the number of housing units in Boston's housing stock in 1980, we carefully examined the BRA Research Department's estimation of the housing stock (Rolf Goetze) and any documentation of housing stock changes from 1970 to 1980. (1977 Annual Housing Survey, Rolfe Goetz and Bonnie Heudorfer). The BRA estimate came from a careful study of building permits, analysis of the 1977 Annual Housing Survey and research financed by the Department of Housing and Urban Development grant to monitor the housing stock. Starting from the housing count provided by the 1970 Census of Housing, the BRA tracked down demolitions, conversions, and new construction and estimated that there were 245,700 housing units in Boston in 1980. In reviewing the BRA's accounting of demolitions, conversions, and new construction, we discovered that the BRA underestimated the reduction in the amount of apartments due to condominium conversion, demolition and transfer to Section 8 subsidy by checking further documentation of the housing stock presented in Heudorfer's work. Our adjustments to the BRA estimation of the housing stock was to decrease the amount of units in 1-4 unit structures by an additional 100 (condominium conversion),[22] increase the estimation of condominiums by 300 units,[23] and increase the loss of apartments due to demolition,[24] condominium conversion,[25] and transfer to Section 8 subsidy by 4,000 units.[26] As a result, we estimate that Boston's housing stock should only be 241,900 which is right in line with the recently released (January 1) Census housing count of 241,194.

APPENDIX E

Boston's Housing Stock: Vacancies and Unsound Structures

Of Boston's 241,900 units, only 221,630 are occupied.[27] Of the 20,270 units that are vacant, (8.4 percent of the housing stock), 7,222 are considered structurally unsound by the surveyers for the BRA Household Survey.

A. 234,678 structurally sound units
x.94441 (% structurally sound units that are vacant)
221,630 # Households in 1980

B. 241,900 total units
234,678 structurally sound units
7,222 structurally unsound units

Of the 13,048 vacant units that are in structures that are considered "sound," 4,600 are vacant public housing units that are considered "vacant, not habitable" as of January 1, 1979. This would leave only 8,448 vacant habitable units available for occupancy, which translates into a 3.67 percent vacancy rate.

The vacant housing stock (or perhabs abandoned) has increased dramatically over the last ten years. In 1970, there were 14,466 vacant units,[28] while in 1980 there are 20,270 vacant units, an increase of 5,804 vacant units. Because of demolition of 1-4 unit structures and apartments and the increase in the number of vacant (abandoned) apartments, the city has lost 15,516 housing units.[29]

Of the 5,804 unit increase in vacant or abandoned units, 4,244 were private market. During the ten year period, 1,560 public housing units became vacant. There were 3,040 (20 percent) in 1970 and 4,600 in 1980 (25 percent).[30]

APPENDIX F

Expected vs. Actual Ownership

The market activity that has the most potential for displacement because of the disproportional federal income tax subsidy is the search for ownership opportunities, whether it be for condominiums or triple deckers. We hypothesize that the incentives for ownership have increased in recent years because of the interaction of inflation with the federal income tax code. In addition, we expect ownership to increase in the city because of the increased income of the incoming households, the acceptance of condominiums, and the inflationary psychology that turns households into investors. We also expect an increase in ownership because of a reduction in redlining and an increased tendency for banks to give loans to women, while we expect a decrease in ownership in the city because of the high interest rates, the delaying of marriage and child bearing, and the concentration of the population in an age group that traditionally prefers to rent.

In order to test our hypothesis of an increase in owner occupancy and the extent the aforementioned factors interacted to increase demand for ownership, we had to calculate expected ownership given the traditional tenure choice of different age groups and compare that with actual ownership behavior. We calculated the expected ownership by multiplying the tenure choice of a particular age group in 1970[31] times the number of households estimated in that age group in 1980.

TABLE APPENDIX F-1:
Projected Ownership Given Household Age Distribution and Propensity to Own by Age Group in 1970

	% Own	HH 1980 (Census)	Projected Ownership 1980
15-24	.052	22,098	1,149
25-34	.1647	67,367	11,095
35-44	.3197	31,627	10,111
45-54	.3483	60,564	21,094
65+	.325	39,974	12,992
		221,630	56,441

The expected ownership behavior based on an assumed constant relationship between life cycle stage and housing tenure choice is estimated to be 25.47 percent (56,441/221,630). Recognizing that the actual ownership behavior was estimated to be 30 percent by the BRA's Household Survey, the evidence seems to support our hypothesis that factors other than age have effected the tenure choice made by Boston residents. 10,048 more households chose to own than would have been expected given the age distribution of Boston's households and tenure choice of households the same age in 1970.

221,630	Households in 1980
.30	% Owner-Occupants (BRA Household Survey 1980)
66,489	Projected # of Owner-Occupants
56,441	Expected # of Owners (Using 1970 Ownership Behavior)
10,048	Increased Demand for Ownership

APPENDIX G

Inventory of Housing Stock from 1970 to 1980: Owner-Occupied, Private Rental and Subsidized Rental Housing

Two factors have influenced the suppliers of rental housing over the last two years. The low incomes of existing tenants has led many suppliers of housing to disinvest and then abandon their housing units or to shift the housing from the private market to the subsidized housing stock through Section 8 subsidy. The high incomes of the incoming households and the increased demand for ownership has led other suppliers of housing to convert their rental units to condominium or sell their absentee-owned 2-4 unit structure to an owner-occupant. This appendix will document the change in housing stock inventory from 1970 to 1980, paying careful attention to the inventories of private market rental, subsidized rental and owner-occupied housing.

The 1970 Census and the BRA housing stock inventory were not amenable to analysis of the breakdown between ownership and rental housing because they either did not differentiate between ownership and rental tenure (BRA-Goetze) or because they did not differentiate between subsidized and non-subsidized housing (Census). With several adjustments (discussed below) we were able to focus on the shift between the private provision of rental housing to either owner-occupancy or subsidized housing.

In 1970, Boston had 232,188 units, of which 217,722 were occupied. 27 percent of the units were owner-occupied and 73 percent were rental housing provided either by the private market or through subsidies. The city-wide vacancy rate in 1970 for owner and rental housing combined was 6.46 percent. A BRA report stated that in 1970, there were 10,000 vacant rental units, 500 units for sale, and almost 4,000 were abandoned and uninhabitable.[32]

The change in the housing inventory is well documented by Rolf Goetze, Bonnie Heudorfer and the BRA research department, but had to be coordinated and then applied to our breakdown of the housing stock so as to best demonstrate the increase in the public provision of housing and the increase in owner-occupancy. The balance sheet below shows the 20,000 unit increase in subsidized housing as a result of new construction and Section 8 subsidies for existing units, and the increase in owner-occupancy due to condominium conversion and the transfer of 2-4 unit structures from absentee-owners to owner-occupants.

1970	Private Rental	150,604	138,418	
	Subsidized Rental	22,000	20,220	
	Owner-Occupied	59,584	59,084	(27%)
		232,188	217,722	

1980	Private Rental	150,604	(1970)
		- 8,700	Demolitions (1-4 unit structures)
		- 2,100	Demolitions (apartments)
		- 2,700	Rental to Section 8 Subsidy
		- 713	Rentals merged into condominiums
		+ 3,100	New construction
		- 3,702	Condominium conversion
		- 3,721	Increase in owner-occupancy
		132,068	(1980)
	Subsidized Rental	+22,000	(1970)
		2,700	Rental to Section 8
		17,300	New construction of subsidized units
		42,000	(1980)
	Owner-Occupied	59,584	(1970)
		+3,702	Condominium conversions
		+ 877	New construction & adaptive reuse
		+3,721	Increase in owner-occupancy
		67,884	(1980)

Methodology and Sources - Our first step is to collect the "given" numbers and then calculate the unknowns. To break down the 1970 Census housing count into private rental, subsidized rental and owner-occupied housing units, we started by knowing that in 1970, 27 percent of the occupied housing units were owner-occupied,[33] 500 housing units were for sale,[34] there were 22,000 subsidized housing units in the city,[35] and there were 232,188 housing units in the city.[36] By adding the owner-occupied to the units for sale we get how many total owner-occupied units there are. By subtracting the subsidized units and the owner-occupied units from the total units we can calculate the number of private market rental units. Applying the same vacancy rate to private and subsidized rental units (8.09 percent) we can estimate the number of occupied market rental and subsidized units.[36.5]

The components of change came from Rolf Goetze's and Bonnie Heudorfer's reports, combining the information from both reports to correct for oversights and double counting.[37] The only undocumented change is the increase in owner-occupancy that occurs when an absentee owner sells his 1-4 unit structure to an owner-occupant. From estimation from the BRA household survey (30 percent of households own) and our household projections (221,630 households), we estimate that there are 66,489 owner-occupants. Assuming that suppliers of housing provide more ownership opportunities than are occupied, we estimate that the range of owner-occupied housing in the cities is 67,179 to 68,604 (assuming a 1-3 percent vacancy rate). Taking the midpoint of the range, we estimate that the number of owner-occupied units in 1980 was 67,884. This number implies more owner-occupancy than previous owner-occupancy in the city plus condominium conversion and condominium construction can explain (64,163 units). Therefore, the difference of 3,721 owner-occupied units can only be explained through a transfer of 1-4 unit structures from absentee owners to owner-occupants.

APPENDIX H

Documentation of Market Activities that Potentially Displace Existing Tenants: Increase in Owner-Occupancy of 2-4 Unit Structures, Turnover of 2-4 Unit Structures from Long Term Owners and Increase in High Rent Apartments from 1970 to 1980

A. Increase in Owner-Occupancy

Our calculation of the increase in owner-occupancy is presented in the last part of Appendix G. From 1970 to 1980, we estimate that Boston experienced an increase in owner-occupied 1-4 unit structures of 3,721 from 1970 to 1980. This is a net increase, thereby not accounting for the fact that additional structures turned over from absentee owners to owner-occupants, but was balanced off by structures in which the owner-occupants sold to an absentee owner.

B. Turnover of 2-4 Unit Structures from Long Term Owners

Turnover of the housing stock from long term owners was quite substantial from 1970 to 1980 because of the large net outmigration of households older than forty five. We estimate that the net number of long term owners who left the city during the last ten years was 6,478.

Methodology - 19,106 fewer households who were older than forty five lived in Boston in 1980 than did in 1970. Assuming that the ownership behavior of these age groups changed little from 1970 to 1980 then we would multiply the propensity to own of a certain age group (45-64, 65+) times the net loss of households in that age group to get the net loss of long time owners.

TABLE APPENDIX H-1:
Loss of Long Term Owner-Occupants from 1970 to 1980

Age Group	Net Loss of Households 1970-80	Propensity to own[38]	Net Loss of long term owners
45-64	-11,509	.3483	4,009
65+	- 7,597	.325	2,469
			6,478

The turnover from long term owners is much larger since there are more sales from long term owners to new buyers, but that is balanced off by owners who were previously younger than forty five becoming older than forty five.

The decline in long term owner-occupants who left the city overestimates the loss of long term owner-occupant landlords because some of the owners who sold their house lived in single family residents. In fact, single family houses represent 55.45 percent of the 1-4 unit structures.[39] Therefore we assume that 55.45 percent of the long term resident homeowners lived in single family homes and the rest in 2-4 unit structures. Our estimate of the net loss of (long term) owner-occupant landlords is 2,886.

C. Increase in High Rent Apartments

Another source of displacement is a very large unaffordable increase in rent. By our definition of displacement in appreciating neighborhoods, we want to find the increase in the number of high rent apartments not explained by increases in costs (defined to be apartments with contract rents greater than $150 per month in constant 1970 dollars).[40] Of Boston's rental apartments, 19 percent rented for over $150 in 1970, while 25 percent rented for $150 (in constant 1970 dollars) in 1980.[41]

Methodology - We had to make several adjustments to our data to project the increase in high rent apartments in Boston. The 25 percent share is of occupied rental units in 1980. From 1970 to 1980, there was a net gain of 1,464 rental apartments and there was an increase of 5,804 vacant units in Boston (20,270 total).[43] Therefore 25 percent of 153,798 (38,450) rental units were high rent apartments in 1980, while 19 percent of 158,138 (30,046) rental units were high rent apartments in 1970.[44] There was an absolute increase of 8,404 high rent apartments in Boston. The city gained 3,100 new rental units due to new construction and lost 1,780 luxury rental units to conversion. Therefore, the net increase in high rent apartments was 7,084.

APPENDIX I

Mismatch between Private Market Demand of Young Incoming Households and Provision of Private Market Housing

The displacement pressure of the surging growth in the number of young professional households seeking housing in Boston is best exemplified by the fact that the number of households who sought housing in the private market increased by 22,133 from 1970 to 1980, while the supply of private market housing units, both ownership and rental, decreased by 10,236. This pressure on the housing market is only relieved by the outmigration of households in other age brackets, a decreasing vacancy rate, and an increase in subsidized housing units.

Methodology - To project how many of the increase in 25-34 year old households (25,886) demanded private market housing we had to estimate what percentage of 25-34 year old households live in subsidized housing versus how many live in non-subsidized housing. Our methodology for making this projection was to compare the age distribution of the population of persons in subsidized housing to the age distribution of persons in non-subsidized housing. Persons age 25-34 tended to have a higher percentage live in non-subsidized housing than other age groups. The BRA Household Survey results estimated that people age 25-34 represented 16 percent of the non-subsidized population and 21 percent of the non-subsidized population.[45] Since a higher percentage of the subsidized housing population is children compared to the population of non-subsidized housing, we felt it would be more precise to examine what percentage of the adult population persons age 25-34 comprised of the subsidized and non-subsidized housing population.

TABLE APPENDIX I-1:[46]
Age Distribution of Subsidized and Non-Subsidized Housing Populations

	Subsidized Housing Age Distribution	Non-Subsidized Housing Age Distribution
0-14	34%	22%
25-29	7%	12%
30-34	9%	9%

A. The 25-34 year olds are 24.2 percent (16/66) of the subsidized housing adult population and,

B. The 25-34 year olds are 26.9 percent (21/78) of the non-subsidized housing adult population.

From this relationship, we can project that there are 8,524 subsidized households (.242 x 35,222) and 50,144 (.269 x 186,408) 25-34 year old households in private market housing. Therefore the projected proportion of 25-34 year old households living in subsidized housing is 14.5 percent, compared to the city-wide average of 15.9 percent. Alternatively, it is estimated that 85.5 percent of the households, age 25-34, live in private market housing. As a result, the private market experienced an inflow of 22,133 (25,886 x .855) households, age 25-34, who were accomodated in the market by an outmigration of households older than 45, the death of elderly households and the movement of households into subsidized housing.

APPENDIX J

Increased Housing Costs Resulting from Condominium Conversion and Housing Turnover

This appendix will show the increase monthly housing cost an existing tenant could expect to pay if her unit is converted to a condominium, or if the structure is transfered to an owner who must pay market rate interest on the loan for the structure. Firstly, we will show the effective cost of housing that is converted to condominiums. Secondly, we examine the effect of interest rates and increased debt service on an existing rental structure.

We assume that a renter whose income is $12,000 per year and is in the 18 percent marginal tax bracket is presently renting an apartment for around $208 per month in Back Bay. Furthermore, we assume that the unit is converted to condominium without any improvements made to the structure. Recent sales in Back Bay have commanded sales prices of ten times the gross annual rent.[47] In this case, the unit would sell for $25,000. ($208/month = 2,496/year). We assume that the tenant can obtain an 80 percent mortgage ($20,000) at 12 percent interest for 25 years, paying $5,000 down. The actual cash costs or out of pocket expenses associated with housing are presented in Table 1. We see that in the first year, cash costs are $382.48/month or 4589.74 per year. This is $174.15 per month more than the previous rent level of $208.33/month. In the second year, cash costs are $399.71/month or $170.55 per month more than rent would be.[48] Cash costs include debt service, condominium ownership fee and property taxes. The cash costs are what a person has to pay, up front in order to own a home.

TABLE APPENDIX J-1
Cash Costs of $25,000 Condominium

Year 1

Cash costs of condominium ownership: $25,000 condominium with 80% mortgage, 12% interest rate for 25 years.

debt service	$2,527.74/year
condominium fee (2.5%)	625.00/year
property taxes (assessed at 23% or Boston average practice)	1,437.00/year
TOTAL	$4,589.74/year

Year 2

debt service	$2,527.74/year
condominium fee* (2.5%)	687.50/year
property taxes* (at 23%)	1,581.25/year
TOTAL	$4,796.49/year

*assumes 10% appreciation and 10% increase in taxes.

TABLE APPENDIX J-2: Economic Cost of $25,000 Condominium

$25,000 condominium purchased with 80% mortgage, 12% interest for 25 years.

Year 1

Costs		Benefits	
interest portion of debt service	$2,392.75	appreciation	$2,500.00
		tax reductions	
foregone interest on down payment*	500.00	prop. taxes	1,437.00
property taxes	1,437.00	mort. interest	2,392.75
condominium fee	625.00	down payment	500.00
		total deductions	4,329.75
		X marginal tax rate	.18
		net tax reduction	779.36
		tax reduction (+) appreciation	3,279.36
total costs	$5,089.74	benefits	$3,279.36

net costs = total costs (-) benefits = 5,089.74-3,279.36 = 1,810.38/yr.

or 150.87/month

*assumes 10% return on investment is foregone on down payment.

Year 2

Costs		Benefits	
interest portion of debt service	$2,375.63	appreciation	$2,750.00
		tax reductions	
foregone interest from down payment	500.00	prop. taxes	1,581.25
property taxes*	1,581.25	mort. interest	2,375.63
condominium fee*	687.50	down payment	500.00
		total deductions	4,436.88
		X marginal tax rate	.18
		tax benefits	798.64
		total benefits (tax benefits (+) appreciation)	$3,548.64

net cost is total costs (-) benefits (5,296.49(-) 3,548.64) = $1,747.85/yr.

or 145.65/month

*Property taxes are assumed to rise at 10%/year and the property (hence the condo fee) to appreciate at 10%/year.

Cash costs are contrasted with economic costs of home ownership. Economic costs take into account the appreciation in the value of the unit as a return on investment. Part of the costs are offset by federal income tax deductions of interest costs and property taxes. Table 2 illustrates economic costs of ownership of the same $25,000 condominium by the same owner with $12,000 income in the 18 percent marginal tax bracket. As can be seen in the tables, economic costs in the first year are $150.87/month or $1,810.44 per year, substantially less than the cost of renting the same unit. On first sight it seems that ownership is less expensive than renting. However, close examination of the situation reveals that few persons will be able to buy their unit that has converted.

Firstly, the existing tenant must come up with the down payment ($ 5,000). Secondly, the resident must be able to front the cash costs ($4,589) of ownership. The resident can receive the tax benefits only once a year and must pay them up front. For our typical tenant with $12,000 income, cash costs would represent about 45 percent of her take home pay. Thirdly, the tenant does not receive the capital gains on the property until it is sold. It is not likely that many tenants can afford the down payment and cash costs of home ownership if their unit is converted. While the economic costs of ownership are less than renting, we feel that few existing residents can afford to pay the down payment and cash costs of their unit if it is converted.

Housing costs are also increased as a result of transfer. Consider a five unit structure commanding rents of $300 per month per unit. Table 3 shows the financial set-up of the property as it operates with no debt service (property is owned outright), at 6 percent interest mortgage on a loan taken in 1964 and at 15 percent interest--a likely rate for February, 1981. We assume that the landlord is charging market rate rents ($300/month), but the property is sold in 1981 and the new owner makes no improvements to the property.

In all three cases, annual gross income is $18,000 and operating expenses are 55 percent and reflect the Boston average. The free and clear or net income before financing is the amount of income left after subtracting expenses that can be used to retire the debt service.

As can be seen in our example, debt service can take out a considerable amount of net income. Consider Case #3 where the structure was transferred or refinanced in 1979. If the structure had a 6 percent mortgage before the transaction, debt service increases by $5,931 per year. That is, cash flow after financing is reduced by $5,931 per year, $494 per month or $99 per unit per month. Consider again Case #3 but where the property was owned outright before the transfer in 1979. Debt service at $8,714 per year reduces cash flow after financing to a negative; the investor must pay the different out of pocket. To achieve the property's previous return the owner must increase rents per unit per month by $145 or 48 percent and this is without any improvement to the property.

In sum, the effects of condominium conversion or transfering a property can increase housing costs that existing residents must pay.

TABLE APPENDIX J-3

Figure 5

EFFECT OF TRANSFER OR REFINANCE

Five Unit Structure currently commanding rents of $300/month.

	Case #1 (owned outright)	Case #2 (6% mortgage in 1964)	Case #3 (15% mortgage in 1979)
ANNUAL INCOME	$18,000	$18,000	$18,000
Operating Expenses* at 55% (Boston's Average)	(9,900)	(9,900)	(9,900)
NET INCOME BEFORE FINANCING (FREE AND CLEAR)	8,100	8,100	8,100
DEBT SERVICE/year**	0	2,783.38	8,714.77
DEBT SERVICE/month	0	231.95	726.23
REDUCTION IN FREE AND CLEAR AS A RESULT OF DEBT SERVICE per month, per unit		46.39	145.25

*Operating expenses @ 55% reflect the Boston Average according to Institute of Real Estate Management, 1969-1979.

**Terms of the mortgage are 6% in 1964 on $36,000 structure for 25 years. The 1979 mortgage is at 15% on $56,700 structure for 25 years.

FOOTNOTES

APPENDIX A

1. 1970 U.S. Census of Population and figures released over the telephone on February 5, 1981 by United States Department of Commerce, Boston Office, Census Division.

2. 1970 Household figures are from 1970 United States Census of Population. 1980 Household information obtained by dividing the household population (total population minus inmates of institutions and others in "group quarters") by the city-wide average household size reported by Census. Source for group quarters population and average household size is The Boston 1980 Census Unofficial Working Numbers; An Incomplete Census; The Undercount and Its Solution. BOSTON'S OFFICIAL LOCAL REVIEW RESPONSE TO THE CENSUS BUREAU. July, 1980. 1970 Housing stock was found in 1970 U.S. Census of Housing. 1980 Housing stock was calculated by adjusting BRA housing counts by incorporating more accurate accountings for components of change of other researchers. Our adjustments coincided with the housing count released over the phone by the U.S. Commerce Department. Boston Office Census division on February 5, 1981 of 241,194.

3. Ibid.

4. Op. Cit. Goetze. p. 165.

5. We used the 5.5% vacancy rate estimated by results from the BRA Household Survey, (Table K-2) to project that there were 227,522 households living in 240,900 housing units. Each houshold was comprised of 2.5 people, the city average released in the BRA Household Survey, (Table H-1) making the household population equal to 568,805. Since the household population in 1970 was 608,500 (Source: Characteristics of Population: Families and Households. Op. Cit.) and we assumed the population in group quarters had not changed over the last ten years, the population estimate was raised to 601,500. (adding constant group quarters population of 32,300).

6. If we took the population 504,000, subtracted the U.S. Census count of group quarter population of 30,669, and then divided by the average household size of 2.4 persons, then there would be 197,221 households in Boston living in 240,900 units, a vacancy rate of 19.47%. Source of group quarter population and average household size: See Footnote 2.

7. Used BRA household survey estimates of a 2.5 average household size (Table H-1) and 5.5% vacancy rate (Table K-2).

8. Op. cit. Footnote 1.

APPENDIX B

9. Op. Cit. (See Footnote 2 in Appendix A. p. 23).

10. Ibid. p. 23.

11. Boston household population in 1970 from 1970 U.S. Census of Population is 217,722.

12. Karen Buglass who developed tables from BRA Household Survey stated in conversation with Chuck Callans on January 18, 1981, that their 5.56% vacancy rate was determined by considering any unit that was boarded up, but structurally sound as vacant. 4500 public housing units were considered "vacant, not habitable" by the Boston Housing Authority. SOURCE: Op. Cit. Goetze, p. 133-134.

APPENDIX C

13. Ibid. p. 164-165.

14. Op. Cit. BRA Household Survey. 1980. Table B-3.

15. 1970 United States Census of Population. Calculated age distribution.

16. Op. Cit. Goetze. p. 165-165.

17. Ibid. Goetze. p. 164-165 for 1970 proportions. BRA Household Survey Tables B-2 and B-4.

18. Op. Cit. BRA Household Survey. Table H-1 for 1970 average household size. Boston's Response to . . . . p. 23. For 1980 average household size, see Footnote #2, Appendix A. p. 23).

19. See Footnote 4 of Chapter 3.

20. 1970 age specific headship rate calculated from 1970 United States Census of Population and Housing.

21. The headship rate increased from .3391 in 1970 to .3522 in 1980 because a higher proportion of the population was over 20 years old in 1980 because of the shift in the age distribution of the population. The headship rate was .394 in 1980, so if the headship rates of individual age groups was increased by 11.87% ((.394/.3522) - 1), then we would get the correct number of households given our population size and age distribution.

APPENDIX D

22. Op. Cit. Heudorfer. p. 30-32. 5% of new construction and adaptive reuse of condominiums came from conversion of single family homes.

23. Ibid. p. 29.

24. Ibid. p. 81. 2000 units demolished in multifamily structures.

25. Ibid. p. 30. 713 units lost due to merging two smaller rental units into one larger condominium.

26. Ibid. p. 81. 20,000 increase in subsidized units from 1970 to 1980 minus the 17,300 units built under federal and state subsidy programs means that 2700 of the increase in subsidized units were a transfer of private rental units to subsidy with a Section 8 certificate. These units must then be subtracted from the private rental housing stock.

APPENDIX E

27. By definition, each household represents one occupied housing unit.

28. Op. Cit. Characteristics of Population: Families and Households . . . August, 1974. p. 1.

29. 8700 1-4 unit structures have been demolished, 2000 units in multifamily structures have been demolished, there has been an increase in vacant abandoned apartments of 3,256 and an increase in "vacant, not inhabitable" public housing units of 1,560. There were 3,966 structurally unsound units in 1970 (14,466-10,500) (SOURCE: See Footnote 15 of Chapter 3). While in 1980 there were 7,222 (20,270-13,048 = 7,222). The increase in the vacancy rate of public housing units may underestimate the loss of public hosuing units because of the increased deterioration of the vacant units between 1970 and 1980. But in 1970 the BHA vacancy rate was 20%, in 1980 it was 25%. (4600 - 3040 = 1560). (SOURCE: Jerry Hickey, Director of Public Information for the Boston Housing Authority. Telephone conversation between Jerry Hickey and Jerry Rappaport on February 5, 1981).

30. Ibid. Jerry Hickey.

APPENDIX F

31. 1970 U.S. Census of Housing.

APPENDIX G

32. Op. Cit. See Footnote 15 of Chapter 3.

33. Op. Cit. BRA Household Survey. Table H-3.

34. Op. Cit. See Footnote 15 of Chapter 3.

35. Op. Cit. Goetze. p. 60.

37. Sources for components of change were 1) Demolitions (1-4): Goetze. p. 60-63. 2) Demolition (apt.) Heudorfer: p. 81. 3) Rental to Section 8 Subsidy. Heudorfer. p. 81. 4) Rents merged to condominiums. Heudorfer. p. 30 (calculated). 5) New construction: Goetze: p. 60-63. 6) Condominium conversion: Heudorfer. p. 30. 7) Increase in owner-occupancy: calculated at end of Appendix G. 8) New construction of subsidized units: Heudorfer p. 81. 9) New construction and adaptive reuse of condominiums. Heudorfer. p. 30.

APPENDIX H

38. U.S. Census of Population and Housing. 1970.

39. Op. Cit. BRA Household Survey. Table K-4.

40. IBID. Table I-4.

41. IBID. Table 1-4.

42. See Appendix G and Appendix E.

43. 1980--(174,068 - 20,270 vacancies * .25 = 38,450). 1970--(172,604 - 14,466 * .19 = 30.046).

APPENDIX I

44. Op. Cit. BRA Household Survey, Table B-5.

45. Ibid.

APPENDIX J

46. Heudorfer, Bonnie. Condominium Development in Boston. 1980. Boston Redevelopment Authority. p. 44.

47. Assume that rent would have increased 10% a year, therefore rent being $229.16 per month in the second year.

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